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St. Lawrence Seaway Authority

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1st
Annual Report

**FOR THE FISCAL YEAR ENDED
DECEMBER 31, 1954**



The St. Lawrence Seaway Authority

THE ST. LAWRENCE SEAWAY AUTHORITY

1st

ANNUAL REPORT

*For the Fiscal Year Ended
December 31, 1954.*

OTTAWA, CANADA

THE ST. LAWRENCE SEAWAY AUTHORITY

OFFICE OF THE PRESIDENT

MARCH 30, 1955.

The Honourable George Marler,
Minister of Transport,
Ottawa, Ontario.

Dear Sir:

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from inception (July 1, 1954) to December 31, 1954, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

LIONEL CHEVRIER

THE ST. LAWRENCE SEAWAY AUTHORITY

THE HONOURABLE LIONEL CHEVRIER, Q.C., P.C.,
President

CHARLES GAVSIE, Q.C.,
Vice-President

C. W. WEST, P.Eng.,
Member

Executive Officers

A. G. MURPHY *Chief Engineer*
D. W. G. OLIVER *Comptroller*
P. E. R. MALCOLM *Director of Administration*
R. J. BERIAULT *Secretary*

THE ST. LAWRENCE SEAWAY AUTHORITY

FIRST ANNUAL REPORT

The St. Lawrence Seaway Authority was established by Act of Parliament, 1951 (2nd Session), C. 24. This Act was proclaimed and the appointment of its members made public on July 1, 1954.

The Authority is incorporated for the purposes of:

- (a) acquiring lands for and constructing, maintaining and operating all such works as may be necessary to provide and maintain, either wholly in Canada or in conjunction with works undertaken by an appropriate authority in the United States, a deep waterway between the Port of Montreal and Lake Erie;
- (b) constructing, maintaining and operating all such works in connection with such a deep waterway as the Governor in Council may deem necessary to fulfil any obligation undertaken or to be undertaken by Canada pursuant to any present or future agreement.

For the above purposes, the Authority has the capacities and powers of a natural person as if it were a corporation incorporated by Letters Patent under the Great Seal of Canada. Its powers are exercised only as a Federal Government Agency concerned with the construction and management of the St. Lawrence Seaway from the Port of Montreal to Lake Erie.

Following appointment of the Authority Members on July 1, and the selection and appointment of four Branch Heads, the staff of the Special Projects Branch of the Department of Transport engaged on Saint Lawrence seaway work were transferred effective October 1, 1954, to the employ of the Authority.

The Authority made provision for its employees to be contributors under the Public Service Superannuation Act. The rules governing the terms of employment for regular employees of the Authority are closely parallel to those of the Civil Service. The regulations governing the conditions of pay and employment of casual employees of the Authority closely parallel those established by the Treasury Board for prevailing rate employees of the Civil Service.

The Authority presently maintains executive offices in Ottawa and operating headquarters in Montreal. There are, in addition, a number of field offices related to the surveying and inspection work in the field as well as the actual construction projects under way. The site has been acquired and plans are being proceeded with for the construction of a building suitable as the operating headquarters for the Authority in Cornwall, Ontario. It is not expected that this building will be ready for occupancy before the beginning of 1957.

STATUS OF THE PROJECT AS OF DECEMBER 31, 1954

Prior to the appointment of The St. Lawrence Seaway Authority, on July 1, 1954, the Special Projects Branch of the Department of Transport was charged with the preliminary work on the seaway: aerial photographic surveys, geodetic surveys, hydrographic surveys, hydraulic models for river investigations and lock design, planning, estimates and design engineering. The cost of this work is to be charged to The St. Lawrence Seaway Authority and is estimated at \$1,493,422.

There follows a description of the project and the work done to date on the seaway. Attached is drawing No. 3806, of January 13, 1955, reproducing the Plan of the Seaway from Montreal to Prescott.

LACHINE SECTION

General Description

The general plan adopted for navigation alone, and keeping in mind the future development of power in this section of the river by the Quebec Hydro, comprises the following:

- (a) A channel from Montreal Harbour will be excavated along the south shore up to Victoria Bridge. The water level in this channel will be the same as that in the Montreal Harbour. A dyke will separate this channel from the Rapids below Victoria Bridge.
- (b) The Jacques Cartier Bridge, from St. Helen's Island to the south shore, will be raised to provide a navigation clearance of 120 feet at high water level.
- (c) A lock with a lift of about 15 feet will be located immediately upstream from Victoria Bridge.
- (d) The Victoria Bridge presented a very difficult transportation problem, and after close collaboration with the Canadian National Railways and the exploration of approximately fifteen different methods of dealing with the highway and railway problem, a relatively simple solution was found, comprising the construction across the canal below the lock of a combined railway and highway (lift or swing span), and a highway diversion along an embankment parallel to the lock, and a second lift bridge for highway purposes at the upper end of the lock so as to permit uninterrupted highway traffic.
- (e) A channel from this lock will skirt the shore of Laprairie Basin, with a dyke to separate the channel from the river.
- (f) A lock with a lift of about 35 feet will be located at the upper end of Laprairie Basin, opposite Côte Ste. Catherine.
- (g) A channel will be excavated overland from this lock to Caughnawaga.
- (h) A modification and extension of the Honoré Mercier Bridge will provide for uninterrupted highway traffic over a high level highway crossing over the canal with a navigation clearance of 120 feet.

- (i) A double track lift bridge will be constructed for the C.P.R. railway.
- (j) A channel from Caughnawaga will be excavated along the south shore of Lake St. Louis to deep water, at a point opposite the Châteauguay River.
- (k) Some scattered channel dredging will be required within Lake St. Louis.

The work done in this Section to date include the following:

(a) *Surveys*: basic surveys, precise levelling, field surveys, soundings, test borings.

(b) *Land acquisition*: Arrangements have been made with property owners for right of way for surveys and test borings. Leases have been negotiated for field office and other purposes.

A plan is being prepared for the acquisition of the water lot fronting the city of St. Lambert. An expropriation plan has been filed for the acquisition of the necessary water lot in the Laprairie Basin from the western limit of the Harbour of Montreal property to the foot of Lachine Rapids, including whatever private riparian rights which may also be involved.

A plan has been filed for the expropriation of the necessary property at Côte Ste. Catherine. A plan is being prepared for the acquisition of the necessary land at the Caughnawaga Indian Reservation. An expropriation plan has been filed for the acquisition of the water lot at the east end of Lake St. Louis opposite the town of Caughnawaga.

(c) *Designs of structures and works*: Studies are in progress with respect to the following:

(i) The site and design of the locks immediately upstream of Victoria Bridge and at Côte Ste. Catherine.

(ii) The location and design of the Laprairie Basin Canal and the Canal from Côte Ste. Catherine to Lake St. Louis.

(iii) The design, plans and specifications for the modification of Jacques Cartier, Victoria and Honoré Mercier Bridges.

(iv) The remedial works required in respect of the water supply, sewage, drainage and other problems relating to municipal services along the south shore of the river which may be affected by the construction of the seaway.

(v) The structural design of gates, valves, fenders, with a view to standardizing all equipment for all structures on the seaway.

(vi) The mechanical and electrical engineering for the operation of lock and canal equipment.

(d) *Construction*: Tenders for the Excavation of the Channel and Construction of the Dyke between Victoria and Jacques Cartier bridges were invited by public advertisement on September 22, 1954, the closing date for the receipt of tenders being October 18, 1954.

Sixteen bids were received, ranging from a low of \$2,314,500.00 to a high of \$6,495,000.00. The contract was awarded to the lowest bidder and signed on October 29, 1954.

SOULANGES SECTION and LAKE ST. FRANCIS SECTION

Navigation between Lake St. Francis and Lake St. Louis will make use of the canal already constructed by the Beauharnois Light, Heat and Power Company (Quebec Hydro) as was provided for in the agreement of March 1, 1932 between the Department of Railways and Canals and the Beauharnois Company. The general plan for the locks between the Power Canal and Lake St. Louis has been based on an arrangement of twin flight locks.

In addition to the construction of locks, there will be required the following:

- (a) A combined railway and highway lift bridge near Valleyfield.
- (b) A combined railway and highway bridge near St. Louis.
- (c) A railway lift bridge near Melocheville.
- (d) A highway lift bridge at Melocheville.
- (e) Some channel dredging in Lake St. Francis.

INTERNATIONAL RAPIDS SECTION

The works which Canada will actually construct at Iroquois will consist of a short canal across Iroquois Point and a lock with a maximum lift in normal operation of about 6 feet. There will be a rolling lift bridge at the downstream end of the lock for access to Iroquois Point, and for access to the Control dam being constructed by the power agencies. This lock has been designed with an exceptionally long entrance wall at the upstream approach to provide for a number of downbound ships.

The work done in this section to date includes the following:

(a) *Investigations*: extensive hydrographic and hydrometric surveys have been undertaken, involving the measurement of the river flows at the Galop Rapids, at Point Three-Points and at Cornwall. These have been made in collaboration with the Department of Northern Affairs and National Resources, U.S. Lake Survey and the Ontario Hydro Electric Power Commission.

(b) *Land acquisition*: An expropriation plan has been filed for the acquisition of the necessary property at Iroquois Point.

(c) *Designs of structures and works*: Seven alternative locations for the canal and lock at Iroquois were investigated and cost estimates made. When the location of the Control dam being constructed by the Power agencies was settled, it was possible to make a final decision as to the best location for the canal and lock. This was done, and based on it, plans and specifications for the general contract for the construction of the lock and canal were completed, and tenders called on December 1, 1954.

Designs have been completed and foundations constructed for the erection of a swing span over the upper end of Lock 25, Galop Canal, at Iroquois, to provide accommodation for heavy traffic, comprising construction plant and materials, to and from the site of the Iroquois lock and control dam. The swing span being erected previously was located at the Atwater Avenue crossing of the Lachine Canal at Montreal.

(d) Construction:

(i) The contract for the repairs and dismantling of the Atwater Swing Bridge No. 5 and re-erection at Iroquois was let on November 15, 1954. The bridge superstructure has been dismantled, moved to the site and unloaded ready for re-erection. Erection commenced immediately after the New Year's holiday.

(ii) Tenders were advertised for the construction of the Iroquois Lock and Canal on December 1, 1954, and closed on January 25, 1955.

FINANCE

The Authority's activities are financed by advances from the Department of Finance. An initial "working capital" advance of \$100,000 was received on July 13, 1954. Subsequently, the following temporary loans were received from the Receiver-General:—

October 29, 1954	\$350,000
December 30, 1954	\$350,000

These temporary loans, including the initial advance of \$100,000, and aggregating \$800,000, are repayable within a period of twelve months from their respective dates, under the terms of Section 26 of The St. Lawrence Seaway Authority Act. They will be replaced by loans to be authorized by Parliament.

Included in this report is the Statement of Accounts of the Authority for the period from inception (July 1, 1954) to December 31, 1954, certified by the Auditor General of Canada.

OTTAWA, March 17, 1955.

The Honourable G. C. Marler,
Minister of Transport,
Ottawa.

Sir:

The accounts and financial statement of the St. Lawrence Seaway Authority have been examined for the period from inception (July 1, 1954) to December 31, 1954, and a copy of the financial statement, with supporting schedules, is attached. In compliance with the requirements of section 87 of the Financial Administration Act, I now report that, in my opinion:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statement gives a true and fair view of the state of the Authority's affairs as at the end of the financial year;
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

[original signed by]

WATSON SELLAR,
Auditor General.

THE ST. LAWRENCE SEAWAY AUTHORITY
(Established by the St. Lawrence Seaway Authority Act)

Balance Sheet as at December 31, 1954

ASSETS		LIABILITIES	
Cash	\$ 407,238	Accounts Payable and Accrued Liabilities.....	\$ 219,531
Accounts Receivable, Advances, Deposits, etc...	4,379	Provision for reimbursement to the Receiver General of Canada, for preliminary engineering surveys, investigations and design, equipment, and office accommodation supplied by Government departments (estimated).....	1,493,422
Bonds held as Contractors' Security Deposits (Contra)	129,000	Contractors' Security Deposits (bonds, \$129,000; cash, \$300)	129,300
Capital Expenditures—		Contractors' Holdbacks.....	2,782
Assets acquired or in course of construction (Schedule "A").....	\$ 1,669,546	Government of Canada—Temporary Loans under section 26 of the Act.....	800,000
Field office buildings, equipment, etc., at cost, less depreciation absorbed (Schedule "B")..	112,787		
Inventory of small tools and equipment, at cost	7,048		
Deferred administrative and engineering expenses (Schedule "C").....	315,037		
	<u>2,104,418</u>		
			<u>2,645,035</u>

Certified correct:

(sgd.) D. W. G. OLIVER,
Comptroller.

Approved:

(sgd.) LIONEL CHEVRIER,
President.

Certified in accordance with my report dated March 17, 1955 to the Minister of Transport, under section 87 of the Financial Administration Act.

Original signed by WATSON SELLAR,
Auditor General of Canada.

Schedule "B"

THE ST. LAWRENCE SEAWAY AUTHORITY

**Field Office Buildings, Equipment, etc.,
as at December 31, 1954**

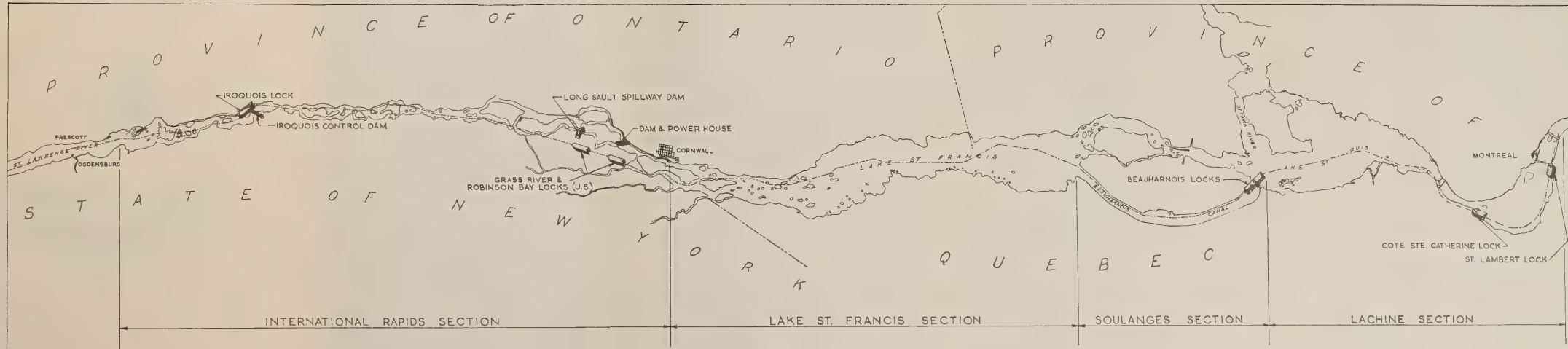
	<i>Cost</i>	<i>Depreciation Absorbed</i>	<i>Book Value</i>
Field Office Buildings	\$ 4,751	\$ 475	\$ 4,276
Shore Equipment, including Motor Vehicles	38,649	11,392	27,257
Floating Equipment	11,707	1,912	9,795
Automobile	2,910		2,910
Office Furniture and Equipment	85,665	17,116	68,549
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	\$ 143,682	\$ 30,895	\$ 112,787
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Schedule "C"

THE ST. LAWRENCE SEAWAY AUTHORITY

**Deferred Administrative and Engineering Expenses
as at December 31, 1954**

Salaries of Board Members and executive officers	\$ 43,167
Other salaries and wages	162,473
Office accommodation—rentals and alterations	25,520
Office and travelling expenses	31,795
Plan reproduction	8,545
Contributions to Public Service Superannuation Account	11,783
Consultants' and analysts' fees	2,513
Depreciation on field office buildings (\$475) and office furniture and equipment (\$17,116)	17,591
Model lock gate	5,000
Interest on temporary loans	2,208
Miscellaneous	4,442
	<hr/>
	\$ 315,037
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THE ST. LAWRENCE SEAWAY AUTHORITY			
PLAN OF SEAWAY MONTREAL TO PRESCOTT			
RECOMMENDED J.H. BURGESS	APPROVED [Signature]	SCALE: 1" = 4 MI. DATE: JAN. 13/55	3806

St. Lawrence Seaway Authority

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CANADA



Annual Report

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1955

The St. Lawrence Seaway Authority

THE ST. LAWRENCE SEAWAY AUTHORITY

ANNUAL REPORT

FOR THE FISCAL YEAR ENDED
DECEMBER 31, 1955:

OTTAWA, CANADA

THE ST. LAWRENCE SEAWAY AUTHORITY

APRIL 3, 1956.

The Honourable George Marler,
Minister of Transport,
Ottawa, Ontario.

Dear Sir:

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1955 to December 31, 1955, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

LIONEL CHEVRIER

THE ST. LAWRENCE SEAWAY AUTHORITY

THE HONOURABLE LIONEL CHEVRIER, Q.C., P.C.,
President

CHARLES GAVSIE, Q.C.,
Vice-President

C. W. WEST, P.Eng.,
Member

Executive Officers

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D. W. G. OLIVER*Comptroller*
P. E. R. MALCOLM*Director of Administration*
RAYMOND J. BERIAULT*Secretary*

THE ST. LAWRENCE SEAWAY AUTHORITY

ANNUAL REPORT 1955

The St. Lawrence Seaway Authority was established by Act of Parliament, 1951 (2nd Session), C. 24. This Act was proclaimed and the appointment of its members made public on July 1, 1954.

The Authority is incorporated for the purposes of:

- (a) acquiring lands for and constructing, maintaining and operating all such works as may be necessary to provide and maintain, either wholly in Canada or in conjunction with works undertaken by an appropriate authority in the United States, a deep waterway between the Port of Montreal and Lake Erie;
- (b) constructing, maintaining and operating all such works in connection with such a deep waterway as the Governor in Council may deem necessary to fulfil any obligation undertaken or to be undertaken by Canada pursuant to any present or future agreement.

For the above purposes, the Authority has the capacities and powers of a natural person as if it were a corporation incorporated by Letters Patent under the Great Seal of Canada. Its powers are exercised only as a Federal Government Agency concerned with the construction and management of the St. Lawrence Seaway from the Port of Montreal to Lake Erie.

During 1955, Division offices were established for the supervision of construction contracts in the various sections of the Seaway at St. Catharines, Ont., Iroquois, Ont., Cornwall, Ont., Beauharnois, P.Q., Côte Ste. Catherine, P.Q. and St. Lambert, P.Q. Division Engineers and Division Administration Officers were recruited and appointed as well as the necessary technical and supervisory personnel.

Stores and Equipment Warehouses were established at Côte Ste. Catherine, P.Q. and Iroquois, Ont., to service their respective areas.

During the course of 1955, the members of The St. Lawrence Seaway Authority and of its United States counterpart, the Saint Lawrence Seaway Development Corporation, met from time to time at Ottawa and Washington to discuss matters of common interest including tolls. Among such matters discussed were the prospective construction schedules, data on engineering and administrative questions, progress and co-ordination of the work in the various sections of the Seaway. The meetings also dealt with the character and volume of future Seaway traffic, the various considerations that enter into the determination of the rate base for tolls and the assessment and collection of tolls.

Of particular interest to both entities is the arrangement for the carrying out of work arising from the necessity of removing the South Channel bridge which carries highway and railway traffic from Cornwall Island to the United States. This bridge must be removed to allow ships to pass through the canal and locks in the United States in the International Rapids Section. Legislation is to be introduced in Parliament to authorize the Authority to participate in the construction of an international bridge across Polley's Gut to link Cornwall Island with the United States mainland and to relocate the related facilities in Canada.

STATUS OF THE PROJECT AS OF DECEMBER 31, 1955

As of December 31, 1955, a total of 30 contracts have been awarded by The St. Lawrence Seaway Authority. The contracts for the construction of permanent facilities required for the Seaway project were awarded after calling for tenders by public advertisement. These 30 contracts are valued at approximately \$60 million. The work completed under these contracts stands at approximately 18 per cent of the total value of contracts awarded.

The Engineering staff has been engaged through its field staff on surveys and supervision and inspection of construction contracts. Through its Office staff, located in the Montreal office, it has been engaged on engineering investigations and design, the preparation of contract plans and specifications. Work has progressed satisfactorily on the structural design of gates, valves and fenders, with a view to standardizing all equipment for all seaway structures. Work also progressed satisfactorily on the mechanical and electrical engineering for the operation of lock and canal equipment.

The progress on major construction projects may be described as follows:

LACHINE SECTION

Excavation

At a point downstream from the Jacques Cartier Bridge, at the entrance to the future channel the contractor is engaged on a contract some 4,900 feet in length to excavate 2,000,000 cubic yards of material, of which 500,000 cubic yards are rock. The contract is valued at \$1,768,900. Awarded June 15, 1955, it is to be completed November 30, 1957.

Total excavation completed on this contract is 665,000 cubic yards. Considerable cofferdamming has been finished, and part of the site dewatered. Dyke construction is also progressing in a satisfactory manner.

(2) Progress is notable from Jacques Cartier Bridge towards Victoria Bridge. This is the location of The St. Lawrence Seaway Authority Contract No. 1, awarded on October 25, 1954.

Valued at \$2,314,500 the contract is for excavation of some 7,600 lineal feet of the Seaway channel and construction of the dyke and is to be completed by June 30, 1957. Cofferdams are complete and the entire contract area is dewatered. Excavation has been progressing satisfactorily and this item is about six per cent ahead of schedule. The total estimated cubic yardage to be excavated is some 3,000,000 cubic yards and approximately 1,800,000 cubic yards have been removed.

The dyke on this contract has been built to within five feet of finished grade throughout its entire length and riprap has been placed to within five feet of grade.

(3) Tenders have been called for the construction of St. Lambert Lock and approaches at Victoria Bridge. This will be the most easterly lock of the Seaway and is to be built at the South Shore end of the bridge. It is one of five which The St. Lawrence Seaway Authority is to build. Seven locks in all will be constructed for the Seaway, of which two will be built by the Saint Lawrence Seaway Development Corporation in the International Section.

Late in December a contract was awarded for the construction of this lock. The work will extend some 5,000 feet and will require the removal of some 2,400,000 cubic yards of material.

(4) Upstream from this lock, some seven miles of excavation of channel and construction of dyke in the Laprairie Basin stretching around to the site of the future Côte Ste. Catherine Lock is in progress.

(a) The most easterly of the two lengthy channel and dyke contracts here is valued at \$4,213,800 and calls for the excavation of 20,000 lineal feet of channel and construction of the requisite dyke. It also includes the construction of a turning basin for ships and the extension of the water intake for the City of St. Lambert. Excavation required will be some 2,000,000 cubic yards of rock and nearly 5,000,000 cubic yards of common excavation. It is to be completed by December 15, 1957.

On this contract cofferdams have been completed and a section of the Seaway channel has been dewatered. The contractor has completed about 30,000 cubic yards of rock excavation. Temporary pumping facilities were installed and are now supplying water to the City of St. Lambert. The contractor has unwatered an area and has laid 360 lineal feet of 36-inch diameter concrete pipe for the construction of the permanent water intake.

(b) Adjoining this contract on the West and South is one of 15,500 feet in length. It involves excavation of some 1,200,000 cubic yards of rock and some 2,500,000 cubic yards of common material and is to be completed by August 31, 1958.

The contractor has completed some cofferdamming and about 1,400 feet of channel has been sealed off and dewatered. Some 100,000 cubic yards of common excavation and 110,000 cubic yards of rock excavation have been removed from the channel. Work has been completed on the installation of a temporary water intake to serve the Town of Laprairie, in accordance with terms of the contract.

(5) Adjoining this contract is that for construction of Côte Ste. Catherine Lock and Approaches. This and the St. Lambert Lock are the two to be built in the Lachine Section of the Seaway. Awarded August 26, 1955 this contract is valued at \$7,107,480 and is to be completed by July 31, 1958.

The work extends a distance of 10,500 lineal feet and in addition to construction of the lock consists of excavation of a navigation channel and the construction of dykes which form the approaches to the lock. It also includes the excavation of a turning basin downstream from the lock, the construction of regulating works for the control of the water level of the upper reach of the canal and the formation of a reservoir pool upstream from the lock.

Common excavation required by this contract will amount to some 2,800,000 cubic yards, rock excavation to some 1,653,500 yards.

Approximately 250,000 cubic yards of common excavation have been removed so far and rock excavation amounted to 200,000 cubic yards. Progress has been made in the placing and rolling of fill and raising of cofferdam.

(6) Valued at \$1,153,000, a contract has been awarded for excavation proceeding along the South Shore from the westerly limits of the Côte Ste. Catherine Lock contract upstream in the direction of the Indian village of Caughnawaga. Under this contract some 340,000 cubic yards of common excavation must be removed, some 490,000 cubic yards of shale and some 800,000 cubic yards of limestone. Entailed also is the laying of 100,000 cubic yards of rock cushion on each side of the channel.

The contractor here has completed the north and south cofferdams for the Côte Ste. Catherine Lock contract (which were part of his channel contract). He has also excavated 315,000 cubic yards of common material, about 540,000 cubic yards of shale and 608,000 cubic yards of limestone.

(7) The last contract awarded in 1955 for excavation on the South Shore proceeds in a westerly direction further overland to a point immediately East of the Honoré Mercier Bridge. This excavation will be some 14,800 feet in extent and will involve 19,000 lineal feet of dyke. It includes 4,600,000 cubic yards of common excavation, 2,900,000 cubic yards of rock excavation, the construction of cofferdams and unwatering. Work is under way and is to be completed by August 31, 1958.

Bridges

Progress on revisions to the Jacques Cartier Bridge and its southern approaches has been made.

Specifications and plans have been revised with a view to proceeding with the construction of temporary fills and roadways and the erection of Bailey Bridges to handle traffic during the period when the Southern approaches to the Jacques Cartier Bridge will be undergoing alterations.

Further work is under way to complete the specifications covering the raising of the bridge piers above their present grades, the jacking of the bridge structure, and the replacement of the existing bridge span between piers Nos. 9 and 10.

Work has been under way since October by the contractor for the cladding of Jacques Cartier Bridge—Piers Nos. 1 to 11 and on the protecting guards around the base of piers Nos. 9 and 10.

On January 27, 1955 a public announcement was made of the scheme adopted by The St. Lawrence Seaway Authority and the Canadian National Railways in respect of alterations to the Victoria Bridge and its southern approaches. Since that date, engineers of both bodies have been working in close co-operation to develop plans for the work.

With regard to the Honoré Mercier Bridge, studies relating to different layouts for the southern approach of the Honoré Mercier Bridge have been completed. General agreement has been reached between the engineers of the Quebec Department of Roads and the Seaway Authority as to the most suitable layout from the point of view of traffic movements.

Dredging

For dredging the Seaway channel in Lake St. Louis, a contract valued at \$8,219,000 was awarded on March 23, 1955, for removal of 3,800,000 cubic yards of overburden and 100,000 cubic yards of solid rock.

As of December 31, 1955, a total of 1,550,000 cubic yards of overburden has been dredged.

Hydraulic Models

Two hydraulic models, one to be known as the Caughnawaga Model or Lachine Rapids Reach Model and the other to be known as the Jacques Cartier Bridge Model or Montreal Harbour Model will be built under a contract awarded early in December. The purpose of the models is to provide means for studies of the Lachine Section in a manner similar to those made by the Authority in the International Rapids Section and by the Hydro-Electric Power Commission of Ontario in the International Rapids Section of the St. Lawrence and in regard to the Niagara Development where such tests in all cases have resulted in economies in carrying out the construction work involved. The Authority will construct a hydraulics laboratory building in which the models are to be built and operated. It will be located in Ville La Salle, near Montreal. A resident engineer will be appointed by The St. Lawrence Seaway Authority as a full-time representative at the model laboratory.

SOULANGES SECTION

Construction

A decision was reached by the Authority concerning the general scheme to be adopted for the proposed locks and canal to be constructed near Beauharnois in the Soulanges Section.

Following extensive studies it was decided to construct separate single locks at the lower end of the Beauharnois Canal. Provision has been made for the twinning of these locks, in the future, should the need arise.

LAKE ST. FRANCIS SECTION

Dredging

On March 23, 1955, three contracts were awarded for the dredging of the Seaway channel in Lake St. Francis. The contract for dredging the Western approach to the Beauharnois Canal calls for the removal of 1,100,000 cubic yards of sand, silt and clay. A total of 272,000 cubic yards had been removed by the end of the year.

The dredging of 600,000 cubic yards of sand, silt and clay at Lancaster Bar was postponed until the early spring of 1956. The third contract for the dredging of the channel from Fraser Point to Cornwall involves the removal of 2,700,000 cubic yards of overburden. By the end of 1955, more than one third of the work had been completed.

INTERNATIONAL SECTION

Headquarters in Cornwall

The plans for the building to be used as the operating headquarters were completed and tenders called by public advertisement in July. The contract was awarded to the lowest tenderer, whose bid was \$1,337,337. By the end of 1955, the piling had been completed and foundations had been started.

Field Engineering

Surveys have been completed in the Polley's Gut area in connection with the location of the proposed new combined railway and highway bridge to be built across the channel at that location. Surveys were made in the same area to establish current flow lines through the river channel.

Subsurface investigations have been conducted to determine the ground water level in the Cornwall and Iroquois areas. Other such investigations dealt with soil samples and rock cores at the site of the proposed combined railway and highway bridge to be built across Polley's Gut.

Construction

On February 11, 1955, the Authority awarded a contract for the construction of a canal and lock at Iroquois Point, Ontario. This lock will be the most westerly one to be built on the Seaway. The contract requires the excavation of about 4,500,000 cubic yards of material, mostly heavy glacial till running on a distance of some 6,600 feet, and is to be completed by November 30, 1957. It is valued at \$6,470,000. Cofferdams had been built at the upstream end of the work and at the year's end excavation was taking place particularly in the lock and gate area. Work was also proceeding on the erection of a concrete mixing plant.

WELLAND SECTION

Plans and specifications were completed for contracts to be awarded for channel excavation in the dry between Locks No. 1 and No. 2, Locks No. 2 and No. 3 and Locks No. 3 to No. 4.

The work was advertised on November 3, 1955, under three contracts. Tenders closed on November 29, 1955, and contracts were subsequently awarded in each case to the lowest bidder. The canal reaches were drained on December 20, 1955, following the closing of navigation and the three individual contractors moved onto the site immediately after that date.

FINANCE

Loans totalling \$16,000,000 were received from the Department of Finance during the Corporation's fiscal year, January 1st-December 31st, 1955. Of this amount, \$500,000 was received on 1st March, 1955, as a temporary advance, authorized by the Governor-in-Council. Such temporary loan is repayable within twelve months from date received, under the terms of Section 26 of The St. Lawrence Seaway Authority Act. \$15,500,000 is considered to be "long-term" borrowing, and will form part of the ultimate total principal of loans to be amortized from toll revenues over a period not exceeding fifty years, as required by Section 16 of The St. Lawrence Seaway Authority Act.

Included in this report is the Balance Sheet of the Authority at 31 December, 1955, certified by the Auditor-General of Canada; together with supporting schedules showing cost of Construction Work in Progress and construction facilities acquired. Also shown are details of Administration and Engineering expenses which will be distributed over the cost of the physical work upon completion of the construction programme.

OTTAWA, March 26, 1956.

The Honourable G. C. MARLER,
Minister of Transport,
OTTAWA.

SIR:

The accounts and financial statement of The St. Lawrence Seaway Authority have been examined for the year ended December 31, 1955, and a copy of the financial statement, with supporting schedules, is attached. In compliance with the requirements of section 87 of the Financial Administration Act, I now report that, in my opinion:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statement of the Authority
 - (i) was prepared on a basis consistent with that of the preceding year and is in agreement with the books of account, and
 - (ii) the financial statement gives a true and fair view of the state of the Authority's affairs as at the end of the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

(Sgd.) WATSON SELLAR,
Auditor General.

THE ST. LAWRENCE SEAWAY AUTHORITY (Established by the St. Lawrence Seaway Authority Act)

Balance Sheet as at December 31, 1955

<i>Assets</i>		<i>Liabilities</i>	
Cash		Accounts Payable and Accrued Liabilities	\$ 1,220,282
Advances, Deposits, etc.		Temporary Loans by the Government of Canada under section 26 of the Act	500,000
Bonds and Cash held as Contractors' Security Deposits		Provision for Reimbursement to the Receiver General of Canada, of costs incurred for preliminary engineering surveys, investigations and design, and for equipment supplied by Government departments	1,477,786
Deposit with the Receiver General of Canada, through Crown Assets Disposal Corporation ..		Contractors' Holdbacks	1,043,513
Capital Expenditures—		Contractors' Security Deposits (Contracta)	2,836,287
Assets acquired or in course of construction (Schedule "A") ...	\$15,272,941	Suspense Account—represented by balance on deposit with the Receiver General of Canada (Contra)	65,054
Field office buildings, equipment, etc., at cost, less depreciation absorbed (Schedule "B")	410,698	Loans by the Government of Canada under section 25 of the Act	\$15,500,000
Inventory of materials, small tools and equipment, at cost	38,268	Add: Interest accrued thereon ...	152,928
Deferred administrative and engineering expenses (Schedule "C")	2,052,280		<hr/> 15,652,928
	<hr/> 17,774,187		<hr/>
			<hr/> \$22,795,850

Certified correct:

(Sgd.) D. W. G. OLIVER
Comptroller

Approved:

(Sgd.) LIONEL CHEVRIER
President

Certified in accordance with my report dated March 26, 1956 to the Minister of Transport, under section 87 of the Financial Administration Act.

WATSON SELLAR

Auditor General of Canada

THE ST. LAWRENCE SEAWAY AUTHORITY

Assets Acquired or in Course of Construction to December 31, 1955

	Lachine (Laprairie) Section	Soulanges Section	Lake St. Francis Section	International Rapids Section	Welland Section	General	Total
Engineering Surveys, etc.—							
Preliminary engineering surveys, investigations and design by the Department of Transport (subject to analysis and distribution to sections affected)						\$ 1,352,926	\$ 1,352,926
Field surveys	\$ 82,747	\$18,064	\$ 10,274	\$ 43,554	\$ 7,942		162,581
Hydraulic surveys and investigations	37,431			26,195			63,626
Quarry exploration	4,901			383			5,284
Professional services for special surveys and investigations	127,320						127,320
Models of locks and rivers						39,542	39,542
Model of Bridge-o-Matic Controls and Mitre Gate						7,879	7,879
Land—Right of Way	2,211,293			150,286			2,361,579
Seaway Office Building, Cornwall						158,569	158,569
Alterations to existing Bridges, Roads, Water Intakes, etc.	435,028			99,517			534,545
Channel Excavation and Construction of Dykes ...	7,260,314		1,886,195				9,146,509
Canal Locks	443,862			861,311	7,408		1,312,581
	\$10,602,896	\$18,064	\$ 1,896,469	\$ 1,181,246	\$15,350	\$ 1,558,916	\$15,272,941

Note: The amounts shown in the above Schedule include charges for depreciation on shore and floating equipment to a total of \$26,407.

Schedule "B"

THE ST. LAWRENCE SEAWAY AUTHORITY

Field Office Buildings, Equipment, etc., as at December 31, 1955

	<i>Cost</i>	<i>Depreciation Absorbed</i>	<i>Book Value</i>
Shore Equipment, including field motor vehicles	\$ 61,327	\$ 15,698	\$ 45,629
Floating Equipment	152,793	10,546	142,247
Field Office Buildings—			
Completed	72,563	6,200	66,363
In progress	9,710	.....	9,710
Automobiles	4,870	745	4,125
Office Furniture and Equipment ..	167,990	25,366	142,624
	<hr/>	<hr/>	<hr/>
	\$469,253	\$ 58,555	\$410,698

Schedule "C"

THE ST. LAWRENCE SEAWAY AUTHORITY

**Deferred Administrative and Engineering Expenses
as at December 31, 1955**

Salaries of Board Members and executive officers	\$ 137,000
Other salaries and wages	1,237,239
Office accommodation—rentals and alterations	77,156
Office and travelling expenses	224,123
Plan reproduction	23,119
Contribution to Public Service Superannuation Account	73,912
Consultants' and analysts' fees	34,616
Depreciation on field office buildings, automobiles and office furniture and equipment	32,311
Interest on loans	177,271
Miscellaneous	35,533
	<hr/>
	\$2,052,280

St. Lawrence Seaway Authority
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CANADA

Annual Report

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1956

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The St. Lawrence Seaway Authority

CANADA

Government
Publications

ANNUAL REPORT

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1956

THE ST. LAWRENCE SEAWAY AUTHORITY

THE ST. LAWRENCE SEAWAY AUTHORITY

March 29, 1957.

The Honourable George Marler,
Minister of Transport,
Ottawa, Ontario.

Dear Sir :

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1956, to December 31, 1956, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

LIONEL CHEVRIER

THE ST. LAWRENCE SEAWAY AUTHORITY

THE HONOURABLE LIONEL CHEVRIER, Q.C., P.C.,
President

CHARLES GAVSIE, Q.C.,
Vice-President

C. W. WEST, P.Eng.,
Member

Executive Officers

RAYMOND J. BERIAULT *Secretary*
A. G. MURPHY *Chief Engineer*
D. W. G. OLIVER *Comptroller*
P. E. R. MALCOLM *Director of Administration*
LUC COUTURE *Counsel*

THE ST. LAWRENCE SEAWAY AUTHORITY

ANNUAL REPORT 1956

The St. Lawrence Seaway Authority was established by Act of Parliament, 1951 (2nd Session), C. 24. This Act was proclaimed and the appointment of its members made public on July 1, 1954.

The Authority is incorporated for the purposes of :

- (a) acquiring lands for and constructing, maintaining and operating all such works as may be necessary to provide and maintain, either wholly in Canada or in conjunction with works undertaken by an appropriate authority in the United States, a deep waterway between the Port of Montreal and Lake Erie;
- (b) constructing, maintaining and operating all such works in connection with such a deep waterway as the Governor in Council may deem necessary to fulfill any obligation undertaken or to be undertaken by Canada pursuant to any present or future agreement.

For the above purposes, the Authority has the capacities and powers of a natural person as if it were a corporation incorporated by Letters Patent under the Great Seal of Canada. Its powers are exercised only as a Federal Government Agency concerned with the construction and management of the St. Lawrence Seaway from the Port of Montreal to Lake Erie.

During 1956, progress has continued in the five following main fields of endeavour :

- the preparation and issuance of design plans and specifications for all works required to complete the Seaway;
- the supervision and inspection of contracts in operation;
- the continuation of field surveys, including basic surveys, subsurface investigations, metering of river flow, sounding of lakes and river channels, the establishment and acquisition of right of way;
- the construction and testing of lock and river models;
- close cooperation with interested groups and public utilities, particularly with reference to remedial works, improvements, railway and highway relocations, necessitated by Seaway construction in the Laprairie, Soulages and International Rapids Sections.

During the course of 1956, the members of The St. Lawrence Seaway Authority and of its United States counterpart, the Saint Lawrence Seaway Development Corporation, met from time to time at Ottawa and Washington to discuss matters of common interest including tolls. Among such matters discussed were the prospective construction schedules, data on engineering and administrative questions, progress and coordination of the work in the various sections of the Seaway. The meetings also dealt with the character and volume of future Seaway traffic, the various considerations that enter into the determination of the rate base for tolls and the assessment and collection of tolls.

Of particular interest to both entities is the decision to build a high level suspension bridge over the South Channel of the St. Lawrence River between Cornwall Island and the United States mainland. This new bridge will replace the existing South Channel Bridge which has been used for



ST. LAWRENCE SEAWAY AUTHORITY PHOTO

Construction of the St. Lambert Lock, near the South end of Victoria Bridge, proceeds as monolith after monolith takes form. Thirty-two of these enormous cubes of concrete will be built on each side to form the chamber of the lock, which will be enclosed at each end by gates. We are looking generally upstream. The lift of this, the first lock of the Seaway from seaward, will be 15 feet. The St. Lawrence Seaway Authority is building four more locks, and the United States entity, two, for the seven new locks required. The building in background is the concrete batching plant, to supply fresh concrete to be placed in forms to build the lock monoliths. It comes to the forms by conveyor belt, here. Some 800,000 tons of concrete will be required for this lock alone.

both highway and railway traffic from Cornwall Island to the United States. This bridge must be removed to allow ships to pass through the canal and locks in the United States in the International Rapids Section. The decision was taken by The St. Lawrence Seaway Authority following legislation voted by Parliament to authorize the Authority to participate in the construction of this international bridge.

STATUS OF THE PROJECT AS OF DECEMBER 31, 1956

As of December 31, 1956, a total of 80 contracts have been awarded by The St. Lawrence Seaway Authority. The contracts for the construction of permanent facilities required for the Seaway project were awarded after calling for tenders by public advertisement. These 80 contracts are valued at \$190,000,000. The work completed under these contracts stands at approximately 35 per cent of the total value of contracts awarded.

The progress on major construction projects may be described as follows :

LACHINE SECTION

Excavation

(1) At a point downstream from the Jacques Cartier Bridge, at the entrance to the future channel the contractor is engaged on a contract some 4,900 feet in length to excavate 2,000,000 cubic yards of material, of which 500,000 cubic yards are rock. The contract is valued at \$1,768,900. Awarded June 15, 1955, it is to be completed November 30, 1957.

This contract is 75 per cent completed. Cofferdamming is completed and dyke construction has progressed according to schedule.

(2) Progress is notable from Jacques Cartier Bridge towards Victoria Bridge. This is the location of The St. Lawrence Seaway Authority Contract No. 1, awarded on October 25, 1954.

This contract is for excavation of some 7,600 lineal feet of the Seaway channel and construction of the dyke and is to be completed by June 30, 1957. The entire contract area is about six per cent ahead of schedule. The total estimated cubic yardage to be excavated is some 3,000,000 cubic yards of which 97 per cent has been completed. Dykes are also completed. This contract will be completed some five months before the completion date called for in the specifications.

(3) Early in the new year, the contractor started work for the construction of St. Lambert Lock and approaches at Victoria Bridge. This will be the most easterly lock of the Seaway and is to be built at the South Shore end of the bridge. It is one of five which The St. Lawrence Seaway Authority is to build. Seven locks in all will be constructed for the Seaway, of which two will be built by the Saint Lawrence Seaway Development Corporation in the International Section.

This contract includes the construction of the lock and excavation extending some 5,000 feet and will require the removal of some 2,400,000 cubic yards of material. The contractor has now completed 26 per cent of the work.

(4) Upstream from this lock, some seven miles of excavation of channel and construction of dyke in the Laprairie Basin stretching around to the site of the future Cote Ste. Catherine Lock is in progress.



COTE STE. CATHERINE LOCK UNDER CONSTRUCTION — The lift of this lock will be 30 ft. and will enable ships to travel from the canal in the Laprairie Basin to the overland canal connecting the Côte Ste. Catherine Lock with the channel in Lake St. Louis. This lock is being built to bypass the Lachine Rapids.

(a) The most easterly of the two lengthy channel and dyke contracts here is valued at \$4,213,800 and calls for the excavation of 20,000 lineal feet of channel and construction of the requisite dyke. It also includes the construction of a turning basin for ships and the extension of the water intake for the City of St. Lambert. Excavation required will be some 2,000,000 cubic yards of rock and nearly 5,000,000 cubic yards of common excavation. It is to be completed by December 15, 1957.

On this contract cofferdams have been completed and work on the impervious section of the dyke has been carried through the whole year. Work has reached the 72 per cent mark.

(b) Adjoining this contract on the West and South is one of 15,500 feet in length. It involves excavation of some 1,200,000 cubic yards of rock and some 2,500,000 cubic yards of common material and is to be completed by August 31, 1958.

The contractor has completed the cofferdamming. Some 1,002,000 cubic yards of common excavation and 745,000 cubic yards of rock excavation have been removed from the channel. Work has been completed on the installation of a temporary water intake to serve the Town of La-prairie, in accordance with terms of the contract. This contract is 52 per cent complete.

(5) Adjoining this contract is that for construction of Cote Ste. Catherine Lock and Approaches. This and the St. Lambert Lock are the two to be built in the Lachine Section of the Seaway. Awarded August 26, 1955 this contract is valued at \$7,107,480 and is to be completed by July 31, 1958.

The work extends a distance of 10,500 lineal feet and in addition to construction of the lock consists of excavation of a navigation channel and the construction of dykes which form the approaches to the lock. It also includes the excavation of a turning basin downstream from the lock, the construction of regulating works for the control of the water level of the upper reach of the canal and the formation of a reservoir pool upstream from the lock.

Common excavation required by this contract will amount to some 2,800,000 cubic yards, rock excavation to some 1,653,500 yards.

Approximately 1,538,000 cubic yards of common excavation have been removed so far and rock excavation amounted to 1,070,000 cubic yards.

The pouring of concrete in the future lock walls started on July 1, 1956, as scheduled. As of December 31, 1956, nearly half the concrete had been poured. Taken as a whole, this contract is now 47 per cent complete.

(6) A contract extending approximately 5,000 lineal feet was awarded for excavation proceeding along the South Shore from the westerly limits of the Cote Ste. Catherine Lock contract upstream in the direction of the Indian Reserve of Caughnawaga. This contract scheduled for completion on October 30, 1956 was completed eight months ahead of time.

(7) Proceeding in a westerly direction further overland to a point immediately east of the Honore Mercier Bridge, another contract for excavation awarded in December 1955 progressed during 1956. This excavation is 14,000 feet in extent and involves 19,000 lineal feet of dyke. It includes 4,600,000 cubic yards of common excavation of which 2,000,000



Excavation taking place in Beauharnois where the future Lower Beauharnois Lock will be located. This lock, as well as the Upper one, will have a lift of 42 ft. These two locks will take ships from Lake St. Louis into the Beauharnois Power Canal, already excavated to the required 27 ft. depth.

cubic yards have been completed and 2,900,000 cubic yards of rock excavation of which 800,000 cubic yards have been completed. Valued at \$4,877,700 this contract is scheduled for completion on September 30, 1958.

(8) Another excavation contract, including embankments and the C.P.R. Bridge sub-structure, was awarded in the early fall of 1956. Valued at \$3,327,725, it is scheduled for completion on November 30, 1958. As of December 31, 1956, the contractor has completed 12 per cent of the work.

(9) The last excavation contract in the Lachine Section is located entirely in the Caughnawaga Indian Reserve. It involves 11,500 lineal feet of excavation and the construction of a dyke extending some 5,000 feet into Lake St. Louis. The excavation is to be made in three stages. As of December 31, 1956, the work was 54 per cent complete. This contract is valued at \$5,843,750 and is to be completed by September 30, 1958.

Dredging

(1) A contract was awarded in May 1956 for dredging the approach to the Seaway channel from the Montreal Harbour. Valued at \$10,636,000 this contract is scheduled for completion on August 31, 1958. At the end of the year, the contractor had completed 21 per cent of the work.

(2) For dredging the Seaway Channel in Lake St. Louis, a contract valued at \$8,219,000, was awarded March 23, 1955, for removal of 3,800,000 cubic yards of overburden and 100,000 cubic yards of solid rock.

As of December 31, 1956, a total of 2,948,461 cubic yards of overburden had been dredged. Scheduled for completion on August 31, 1958, this contract now 70 per cent completed is ahead of schedule.

Bridges

(1) Jacques-Cartier Bridge : The construction of the Seaway channel along the south shore of the St. Lawrence River in the Lachine Section, directly opposite the City of Montreal, involves extensive modifications to the foundations, superstructure, and southern approaches of the Jacques Cartier Bridge.

The Seaway channel will intersect the bridge structure between piers No. 9 and No. 10 at which point it is necessary to provide 120 feet clearance above high water level to allow ships to pass up and down the channel.

The bridge structure presently has a clearance of approximately 40 feet between the lower chord of the existing deck truss span and high water level.

Replacement of the existing deck truss span by a through-truss span will contribute about 30 feet additional clearance over the channel.

The remaining 50 feet clearance required will be accomplished by jacking the bridge structure and extending the supporting piers vertically upwards in progressive stages without interruption to the flow of traffic over the bridge.

The adjoining bridge spans on each side of the Seaway channel will be raised varying amounts to produce a gradual maximum grade on the traffic lanes of 4.2 per cent.

Temporary Bailey Bridges and temporary access roadways will be installed by the Authority to divert traffic, from the two southern spans



This open cut through hard abrasive sandstone is for a four-lane highway tunnel under the upper end of the Lower Beauharnois Lock, near Melocheville, Que. The lock is being built running at approximately right angles to this tunnel. This tunnel is being built to ensure uninterrupted traffic on highway leading to and from Valleyfield, P.Q.

on the bridge structure and around the existing plaza for a period of about one year, during which time the new roadway system, grade separations, and new plaza and toll booths will be constructed.

The new through-truss bridge span over the channel is to be erected on falsework beside the present span and the operation of replacing the new for the old span will be accomplished with a total interruption to traffic of between 4 and 6 hours.

Two contracts have been awarded for the above-described work :

(a) one contract deals with the enlargement of the Bridge Piers Nos. 1-11 and is valued at \$940,810. It is now 88 per cent completed.

(b) the other contract, valued at \$6,928,720 is scheduled for completion on October 30, 1958.

(2) Victoria Bridge : This bridge is owned and operated by the Canadian National Railways. C.N.R. and Seaway Authority Engineers have found a solution to the problem raised by this bridge. They have agreed upon a plan which involves the use of canal dykes and embankments which will permit uninterrupted vehicular traffic across the Seaway. At the same time, a diversionary bridge for railway purposes will be built by the Canadian National Railways. Uninterrupted highway traffic at the Seaway crossing is being provided for by the simple arrangement of two lift spans, one at Victoria Bridge and the other at the upper end of St. Lambert Lock located just above Victoria Bridge. A contract for the construction of the superstructure for two vertical lift bridges at St. Lambert Lock and valued at \$6,061,640 was awarded in late December 1956.

(3) Honore Mercier Bridge : Because of the increase in the volume of traffic over this bridge completed in 1935 by the Lake St. Louis Bridge Commission, an agency of the government of the Province of Quebec, the St. Lawrence Seaway Authority has decided to elevate the southerly part of the bridge over the ship channel which, at this point, passes through a portion of the South Shore in the Caughnawaga Indian Reserve. The bridge, as modified, will be an overhead bridge with modern and appropriate approaches on the South Shore having 26-foot wide modern divided highways and grade separations. The new approaches will have separate ramps, one for eastern traffic and one for western traffic.

A contract for the construction and maintenance of temporary approaches and demolitions — Honore Mercier Bridge — was awarded during 1956 and the work is progressing satisfactorily. Contracts for the sub-structure and the superstructure of the new overhead portion of the bridge are to be awarded in early 1957. Plans, specifications and drawings are completed and tenders have been called on two of the five contracts to be awarded to cover all the modifications on this bridge.

(4) Canadian Pacific Railways Bridge : A contract amounting to \$3,031,097 was awarded by the end of 1956 for the superstructure of two Vertical Lift Bridges to be installed in the embankment leading to the Canadian Pacific Railways Bridge upstream from Honore Mercier Bridge.

Remedial Works

Because of the construction of the Seaway remedial works are required on the South Shore in the Lachine Section. These remedial works include water supply and sewers for the Municipalities of Longueuil, Montreal



Concrete approach walls, 3400 feet in length, being built at the upper end of the future Iroquois Lock.

South, Jacques-Cartier, St. Lambert and Preville. Contracts for these remedial works include the following :

(a) Construction of a pipeline for water intake for the Municipalities of Longueuil and Jacques-Cartier at a cost of \$535,200. This contract is 97 per cent complete.

(b) Construction of a water intake for the Municipalities of Longueuil and Jacques-Cartier at a cost of \$127,726. This contract is 96 per cent complete.

(c) Construction of a collector sewer and outfalls for the Municipalities of Montreal South, Jacques-Cartier, St. Lambert and Preville at a cost of \$1,845,405. This contract is 37 per cent complete.

Hydraulic Models

At Ville LaSalle near Montreal, the Authority has constructed an Hydraulic Laboratory Building in which two Hydraulic Models were built and on which test operations have started. In early December these two models were officially opened by the Minister of Transport.

These two hydraulic models, one known as the Lachine Rapids Reach Model and the other known as the Montreal Harbour Model are part of the Authority's hydraulic model program. Other models have been constructed at the National Research Council Hydraulic Laboratory at Ottawa. One of these models represents the important sections of the St. Lawrence River from the Barnhart Island Powerhouses to Lake St. Francis. This model has been used for the development of a plan for the improvement of the channels in the Cornwall area and also for the development by the power entities of river improvements below the Barnhart Island Powerhouses that will increase their dependable power output. Another model deals with the reproduction of Seaway locks and has been used in the development of a hydraulic system that will enable a ship to pass through the locks in a minimum of time and with a maximum of security.

The two hydraulic models at Ville LaSalle are for the purpose of conducting studies in the Lachine Section in a manner similar to those made by the Authority in the International Rapids Section. All Seaway features have been carefully represented in these two models, at a scale of 1/200 th of the actual river. Tests are now being carried out at the Ville LaSalle Laboratory.

SOULANGES SECTION

Following the adoption by the Authority of a general scheme for the proposed lock and canal to be constructed at Melocheville to lift ships from Lake St. Louis to the Beauharnois Power Canal already dredged to the required 27-foot depth, contracts were awarded for the excavation and construction of locks.

Excavation and Construction of Locks

(1) Valued at \$3,504,999, a contract was awarded in the late spring for the first stage construction of the Lower and Upper Beauharnois Locks and Approaches. The total estimated cubic yardage to be excavated on this contract was 1,455,000 cubic yards. This contract has been completed.

(2) Upon the completion of the above referred to contract, the contractor started work for the construction of the Lower Beauharnois Lock

and Approach. This lower lock together with the upper lock near the Beauharnois Power Canal will provide an 82-foot lift. This contract includes the construction of the lock and excavation of 120,000 cubic yards of common excavation and 1,600,000 cubic yards of rock excavation. It also includes the construction of a tunnel at the upper end of the Lower Beauharnois Lock to ensure uninterrupted traffic on the highway leading to and from Valleyfield. The tunnel, a four traffic lane construction, is to be completed in the spring of 1957. As of December 31, 1956, common excavation was 72 per cent complete, rock excavation, 16 per cent complete. This contract valued at \$11,246,425, of which 10 per cent had been completed on December 31, 1956, is scheduled for completion on November 30, 1958.

(3) Also scheduled for completion on November 30, 1958, is another contract valued at \$14,440,000, for the construction of Upper Beauharnois Lock and Approaches. This contract includes construction of the lock and excavation of 970,000 cubic yards of common excavation and 1,450,000 cubic yards of rock excavation. To date 13 per cent of the contract value has been completed.

(4) A fourth contract was awarded for the production of 1,100,000 cubic yards of concrete aggregates of different sizes and sand to be used in the fabrication of concrete for the two Lower and Upper Beauharnois Lock structures. The required crushing plant was erected and is now producing the required aggregates.

Bridges

Three bridges exist on the Beauharnois Canal — The Melocheville New York Central Railway Bridge, the St. Louis Railway and Highway Bridge and the Valleyfield Railway and Highway Bridge. As of December 31, 1956, a contract valued at \$6,343,146 had been awarded for the supply and erection of Vertical Lift Bridge Spans at both the St. Louis and Valleyfield Bridges. The contract for the superstructure for the New York Central Swing Bridge at Upper Beauharnois Lock is to be awarded early in the new year.

LAKE ST. FRANCIS SECTION

Dredging

On March 23, 1955, three contracts were awarded for the dredging of the seaway channel at Lake St. Francis. The contract for dredging the western approach to the Beauharnois Canal is valued at \$682,000 and calls for the removal of 1,100,000 cubic yards of sand, silt and clay. A total of 435,000 cubic yards has been removed by the end of the year.

The dredging of 600,000 cubic yards of sand, silt and clay at Lancaster Bar which had been postponed until the spring of 1956 has progressed satisfactorily. This contract is ahead of schedule. The total of dredging material to date is 471,000 cubic yards. The second contract for the dredging of the channel from Fraser Point to Cornwall is valued at \$4,698,000, and involves the removal of 2,700,000 cubic yards of overburden. By the end of 1956, 2,000,000 cubic yards had been dredged.

INTERNATIONAL RAPIDS SECTION

Construction

On February 11, 1955, the Authority awarded a contract for the construction of a canal and lock at Iroquois Point, Ontario. This lock will be the most westerly one to be built on the Seaway. The contract requires the excavation of 4,500,000 cubic yards of material, mostly heavy glacial till running on a distance of some 6,600 feet, and is to be completed by November 30, 1957. As of December 31, 1956, the excavation was mostly completed. The approach walls were more than half completed and the concrete had been placed on a portion of the lock structure. Sixty-five per cent of the total work had been completed.

Dredging

Following the decision by the Canadian Government that the dredging in the north channel would take the form of a navigation channel which would bring deep navigation to Cornwall and would also be useful in the future, a contract was awarded in the late fall, valued at \$3,574,000 and involving the excavation of 290,000 cubic yards of common excavation and 214,000 cubic yards of rock excavation.

Arrangements were also made between the two Seaway entities with respect to the division of the work required to be done in the south channel. In this respect, contracts involving 6,500,000 cubic yards of common and rock excavation will be awarded in early 1957.

Bridges

Following the decision of the New York Central Railroad to abandon its railway services between Rooseveltown, N.Y. and Cornwall, Ont., it became apparent that it would be more economical to build a high-level bridge over the south channel than to relocate the facilities of the New York Central Railroad and the Cornwall International Bridge around a loop at Polleys Gut as originally contemplated.

The St. Lawrence Seaway Authority and the Saint Lawrence Seaway Development Corporation proceeded to revise their plans and agreed upon the construction of a high-level bridge over the south channel, the Seaway Authority to build the sub-structure, and the Seaway Development Corporation to build the superstructure. This plan will result in substantial savings to both entities.

HEADQUARTERS IN CORNWALL

Work on the Headquarters Building at Cornwall is progressing satisfactorily. This building should be ready for occupation early in 1958.

WELLAND SECTION

Construction

Three contracts were awarded for channel excavation in the dry between Locks No. 1 and 2, Locks No. 2 and 3 and Locks No. 3 and 4. These three contracts are valued at \$1,100,000 and involve the excavation of approximately 850,000 cubic yards of material. Two of these contracts,

from Lock 1 to Lock 2 and from Lock 3 to Lock 4 have been completed. The third contract between Lock No. 2 and Lock No. 3, 50 per cent is complete.

Dredging

Two dredging contracts were awarded in the fall of 1956. One valued at \$7,280,575 involves the dredging of 250,000 cubic yards of overburden and 397,500 cubic yards of rock. The second contract valued at \$11,623,200 involves the dredging of 672,000 cubic yards of rock. These two contracts are to be completed on September 30, 1958.

GENERAL

During the year 1956 contracts were awarded for the supply and installation of operating equipment on all locks of the St. Lawrence Seaway. These contracts valued at \$19,500,000 include service bridges at locks of the Seaway and varied material such as stiffleg derricks, stop logs, pick-up booms, sector gates, mitre gates, wire rope fenders, generator standby sets, electrical cubicles, electrical control desks, unwatering and sum pumps, valve operating machines, mooring bollards, electrical motors, limit switches, line haulers and lighting standards.

FINANCE

Seaway construction is financed by loans from the Government of Canada. During the Corporation's fiscal year, January 1st — December 31st, 1956, loans totalling \$41,500,000 were received and there was refunded to the Minister of Finance a temporary advance of \$500,000, which had been received 1st March 1955. The total of loans outstanding at the end of 1956 was \$57,000,000.

After the Seaway is in operation, tolls will be charged to amortize the capital expenditure in accordance with the provision of the statute.

Included in this report is a comparative Balance Sheet of the Authority at 31st December, 1956, certified by the Auditor General of Canada; together with the following supporting schedules :

- (a) Assets acquired or in course of construction
- (b) Construction and Administrative Facilities
- (c) Administrative and Engineering Expenses (deferred — to be distributed on completion of construction)

Ottawa, March 7, 1957.

The Honourable G. C. Marler,
Minister of Transport,
Ottawa.

Sir,

The accounts and financial statement of the St. Lawrence Seaway Authority have been examined for the year ended December 31, 1956. In compliance with the requirements of section 87 of the Financial Administration Act, I now report that, in my opinion :

- (a) proper books of account have been kept by the Authority;
- (b) the financial statement of the Authority
 - (i) was prepared on a basis consistent with that of the preceding year and is in agreement with the books of account, and
 - (ii) the financial statement gives a true and fair view of the state of the Authority's affairs as at the end of the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

WATSON SELLAR
Auditor General.

THE ST. LAWRENCE SEAWAY AUTHORITY
(Established by the St. Lawrence Seaway Authority Act)

Balance Sheet as at December 31, 1956
(with comparative figures as at December 31, 1955)

	Assets		Liabilities	
	1956	1955	1956	1955
Cash	\$ 246,721	\$ 2,055,435	Accounts Payable	\$ 3,428,957
Advances, Deposits, etc.	181,307	129,941	Temporary Loans by the Government of Canada under section 26 of the Act	\$ 1,220,282
Bonds and Cash held as Contractors' Security Deposit ..	8,788,607	2,836,287	Provision for Reimbursement to the Receiver General of Canada, of costs incurred for preliminary engineering surveys, investigations and design, and for equipment supplied by Government departments	—
Capital Expenditures —			Contractors' Security Deposits (contra)	500,000
Assets acquired or in course of construction (Schedule "A")	\$60,716,758	15,272,941	Suspense Account	—
Field buildings, equipment, etc., at cost, less depreciation absorbed (Schedule "B")	528,052	410,698	Loans by the Government of Canada under section 25 of the Act	1,593,398
Inventory of lock machinery and equipment, at cost ..	127,167	—	Add: Interest accrued	4,899,366
Inventory of materials, small tools and equipment, at cost ..	233,841	38,268		8,788,607
Deferred administrative and engineering expenses (Schedule "C")	6,059,250	2,052,280		2,836,287
				65,054
				15,500,000
				152,928
				15,632,928
				\$76,881,703
				\$22,795,850

Certified correct :

(Sgd.) D. W. G. OLIVER
Comptroller

Approved :

(Sgd.) LIONEL CHEVRIER
President

Certified in accordance with my report dated March 7, 1957 to the Minister of Transport, under section 87 of the Financial Administration Act.

WATSON SELLAR
Auditor General of Canada

Note : Outstanding commitments under uncompleted construction contracts as at December 31, 1956, amounted to approximately \$140,000,000.

THE ST. LAWRENCE SEAWAY AUTHORITY
Assets Acquired or in Course of Construction to December 31, 1956

	<i>Lachine (Laprairie) Section</i>	<i>Soulanges Section</i>	<i>Lake St. Francis Section</i>	<i>International Rapids Section</i>	<i>Welland Section</i>	<i>General</i>	<i>Total</i>
Engineering Surveys, etc.							
Preliminary engineering surveys, investigations and design by the Department of Transport (subject to analysis and distribution to section affected)						\$1,515,027	\$ 1,515,027
Field charges, including surveys, hydraulic investigations, etc.	\$ 239,684	\$ 79,644	\$ 48,752	\$ 88,082	\$ 39,537	9,614	505,313
Professional services for special surveys and investigations, etc.	224,753						224,753
Hydraulic model building and models						729,908	729,908
Land—Right of Way	4,435,322	611		160,356			4,596,289
Seaway Office Building, Cornwall						738,430	738,430
Bridges—New construction and alterations to existing structures	2,039,468	22,595		101,092			2,163,155
Channel Excavation and Construction of Dykes	24,787,726						30,110,739
Relocation of Roads, Water Intakes and Sewers	1,752,934	27,959	4,170,548		1,152,465		1,781,054
Canal Locks	6,486,542	5,988,990		5,645,898		230,660	18,352,090
	\$39,966,429	\$6,119,799	\$4,219,300	\$5,995,589	\$1,192,002	\$3,223,639	\$60,716,758

Note: The amounts shown in the above Schedule include charges for depreciation on shore and floating equipment to a total of \$57,346.

THE ST. LAWRENCE SEAWAY AUTHORITY

Field Buildings, Equipment, etc.,
as at December 31, 1956

	<i>Cost</i>	<i>Depreciation Absorbed</i>	<i>Book Value</i>
Field Buildings—			
Completed	\$ 87,389	\$ 24,757	\$ 62,632
In progress	40,118	—	40,118
Shore Equipment, including field motor vehicles	103,172	33,511	69,661
Floating Equipment	183,248	23,835	159,413
Automobiles	9,688	1,006	8,682
Office Furniture and Equip- ment	235,567	48,021	187,546
	<u>\$659,182</u>	<u>\$131,130</u>	<u>\$528,052</u>

THE ST. LAWRENCE SEAWAY AUTHORITY
Deferred Administrative and Engineering Expenses
as at December 31, 1956

Salaries of Members and executive officers	\$ 236,025
Other salaries and wages	3,289,333
Contribution to Public Service Superannuation Account and Employees' Welfare Plan	202,466
Consultants' and analysts' fees	82,360
Office and travelling expenses	412,030
Office accommodation—rentals and alterations	134,463
Depreciation on office furniture and equipment	48,021
Field buildings and automobiles—operation and maintenance (including depreciation, \$25,763)	201,050
Plan reproduction	76,768
Information services and public relations	42,874
Interest on loans	1,197,157
Miscellaneous	136,703
	<u>\$6,059,250</u>



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| <p>THOUSAND ISLAND SECTION</p> <ul style="list-style-type: none"> 1 EXCAVATION OF CHANNEL & CONSTRUCTION OF DIKE STA 124+00 TO 200+00 2 CONSTRUCTION OF CANAL & LOCK AT IROQUOIS, QNT 3 DREDGING - LAKE ST. LOUIS CHANNEL 4 DREDGING - LAKE ST. FRANCIS, LANCASTER BAR 5 DREDGING - LAKE ST. FRANCIS, APPROACH TO BEAUMARQUIS CANAL 6 DREDGING LAKE ST. FRANCIS, FRASER POINT TO CORNWALL | <p>INTERNATIONAL RAPIDS SECTION</p> <ul style="list-style-type: none"> 19 EXCAVATION OF CHANNEL STA 710+00 TO 732+00 20 EXCAVATION OF CHANNEL & CONSTRUCTION OF DIKE STA 732+00 TO 124+00 21 EXCAVATION OF CHANNEL & CONSTRUCTION OF DIKE STA 124+00 TO 124+00 22 EXCAVATION OF CHANNEL & CONSTRUCTION OF DIKE STA 250+00 TO 450+00 23 EXCAVATION OF CHANNEL & CONSTRUCTION OF DIKE STA 450+00 TO 800+00 24 WATER INTAKE, MUNICIPALITIES OF LONGUEUIL & JACQUES CARTIER 25 CONSTRUCTION OF COTE STE CATHERINE LOCK & APPROACHES | <p>LAKE ST. FRANCIS SECTION</p> <ul style="list-style-type: none"> 33 ENLARGEMENT OF JACQUES CARTIER BRIDGE PIERS NOS 1 TO 3 34 EXCAVATION OF CHANNEL STA 900+00 TO 922+00 35 EXCAVATION OF CHANNEL STA 922+00 TO 1045+00 & DIKE STA 1045+00 TO 1045+00 36 ST. LAMBERT LOCK & APPROACHES 37 FIRST STAGE CONSTRUCTION LOWER & UPPER BEAUMARQUIS LOCKS & APPROACHES 38 CONSTRUCTION OF LOWER BEAUMARQUIS LOCK AND APPROACHES 39 CONSTRUCTION OF UPPER BEAUMARQUIS LOCK AND APPROACHES 40 EXCAVATION OF CHANNEL STA 900+00 TO 922+00 41 DREDGING - APPROACH AT MONTREAL HARBOUR 42 PRODUCTION OF CONCRETE AGGREGATES AT BEAUMARQUIS 43 COARSE AGGREGATES TO COTE STE CATHERINE LOCK 44 COARSE AGGREGATES TO ST. LAMBERT LOCK 45 FINE AGGREGATES TO ST. LAMBERT LOCK 46 FINE AGGREGATES TO COTE STE CATHERINE LOCK 47 UNLOADING OF SAND & TRANSPORTATION TO COTE STE CATHERINE LOCK AREA 48 UNLOADING OF SAND AND TRANSPORTATION TO ST. LAMBERT LOCK AREA 49 PIPELINE FOR WATER INTAKE AT LONGUEUIL AND JACQUES CARTIER 50 COLLECTION SEWER & OUTFALLS AT MONTREAL SOUTH, JACQUES CARTIER, ST. LAMBERT & PREVILLE | <p>SOULANGES SECTION</p> <ul style="list-style-type: none"> 51 MODIFICATIONS TO JACQUES CARTIER BRIDGE 52 MODIFICATIONS TO HONORE MERCIER BRIDGE 53 SUBSTRUCTURE - PIERS 14 TO 28, HONORE MERCIER BRIDGE 54 SUBSTRUCTURE SOUTH OF PIER 28, HONORE MERCIER BRIDGE 55 SUPERSTRUCTURE PIERS 14 TO 28, HONORE MERCIER BRIDGE 56 SUPERSTRUCTURE SOUTH OF PIER 28, HONORE MERCIER BRIDGE 57 PAVING, LIGHTING, ETC HONORE MERCIER BRIDGE 58 2 V. L. BRIDGES AT CAUGHNAWAGA 59 V. L. BRIDGES AT LOUIS AND VALLEYFIELD 60 2 V. L. BRIDGES AT ST. LAMBERT LOCK 61 SUBSTRUCTURE FOR H. L. BRIDGE CORNWALL ISL 62 DREDGING - 18+00 TO 74+00 NORTH CHANNEL | <p>LACHINE SECTION</p> <ul style="list-style-type: none"> 63 DREDGING & CHANNEL IMPROVEMENTS, CORNWALL ISL 64 EXCAVATION - SOUTH CHANNEL, CORNWALL ISLAND 65 TEMPORARY WATER SUPPLY FOR COURTAULDS LTD CORNWALL 66 SWING BRIDGE AT UPPER BEAUMARQUIS LTD 67 DREDGING - APPROACHES TO IROQUOIS LOCK 68 REGULATING WORKS & ROAD UNDERPASS AT ST. LAMBERT LOCK |
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CANADA

Annual Report

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1957



The St. Lawrence Seaway Authority

CANADA

Government
Publications

ANNUAL REPORT

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1957

THE ST. LAWRENCE SEAWAY AUTHORITY

THE ST. LAWRENCE SEAWAY AUTHORITY

March 31, 1958.

The Honourable GEORGE HEES,
Minister of Transport,
Ottawa, Ontario.

Dear Sir:

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1957, to December 31, 1957, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

B. J. ROBERTS.
President

THE ST. LAWRENCE SEAWAY AUTHORITY

B. J. ROBERTS, C.B.E.,
President

J.-C. LESSARD,
Vice-President

C. W. WEST, P. Eng.,
Member

Executive Officers

RAYMOND-J. BERIAULT *Secretary*
A. G. MURPHY *Chief Engineer*
D. W. G. OLIVER *Comptroller*
P. E. R. MALCOLM *Director of Administration*
LUC COUTURE *Counsel*

NOTE: Charles Gavsie, Q.C., C.B.E. succeeded the Honourable Lionel Chevrier, Q.C., P.C. as President, June 1, 1957.

B. J. Roberts, C.B.E. succeeded Charles Gavsie as President, February 1, 1958.

J.-C. Lessard succeeded Charles Gavsie as Vice-President, July 1, 1957.

THE ST. LAWRENCE SEAWAY AUTHORITY

ANNUAL REPORT 1957

The St. Lawrence Seaway Authority was established by Act of Parliament 1951 (2nd Session), C.24. This Act was proclaimed and the appointment of its members made public on July 1, 1954.

The Authority is incorporated for the purposes of:

- (a) acquiring lands for and constructing, maintaining and operating all such works as may be necessary to provide and maintain, either wholly in Canada or in conjunction with works undertaken by an appropriate authority in the United States, a deep waterway between the Port of Montreal and Lake Erie;
- (b) constructing, maintaining and operating all such works in connection with such a deep waterway as the Governor-in-Council may deem necessary to fulfill any obligation undertaken or to be undertaken by Canada pursuant to any present or future agreement.

For the above purposes, the Authority has the capacities and powers of a natural person as if it were a corporation incorporated by Letters Patent under the Great Seal of Canada. Its powers are exercised only as a Federal Government Agency concerned with the construction and management of the St. Lawrence Seaway from the Port of Montreal to Lake Erie.

Iroquois Lock—First Completed

The Iroquois Lock at Iroquois Point, Ont. in the International Rapids Section of the Seaway was completed in the Autumn of 1957 and received its final test November 22. It is the first to be completed of the seven new locks being constructed and is the most westerly of them. It is one of five which The St. Lawrence Seaway Authority is building. The United States entity, the Saint Lawrence Seaway Development Corporation, is building two.

In 1957 the Authority moved into the last half of the construction period. (The Seaway is to be opened to navigation for its entire length in the Spring of 1959.) During the year progress continued in the five following main fields of endeavour:

1. Supervision and inspection of contracts still in operation.
2. Preparation and issuance of design plans and specifications for completion of the Seaway.
3. Maintenance of field surveys, subsurface investigations, metering of river flow, and sounding of lakes and river channels.
4. Testing of lock and river models and continuing investigations into the performance of ships in restricted channels.



Here is the future entrance to the St. Lawrence Seaway. Vessels having come a thousand miles up the St. Lawrence river from the Atlantic ocean will, in 1959, use the new navigation facilities which are fast approaching completion. The vessels will enter the channel just downstream of the Jacques Cartier Bridge, in middleground, and proceed on their westerly voyage in new 27 foot deep channels providing a minimum width of 200 feet.

5. Acquisition and consolidation of right of way, and in co-operation with the Authority's consulting engineers, planning and supervision of remedial works, improvements, and various railway and highway relocations necessitated by Seaway construction operations.

Tolls Conference Held

During the course of 1957, the members of The St. Lawrence Seaway Authority and its United States counterpart, the Saint Lawrence Seaway Development Corporation, met from time to time at Ottawa and Washington to discuss matters of common interest including tolls. Among such matters discussed were the prospective construction schedules, data on engineering and administrative questions, progress and co-ordination of the work in the various sections of the Seaway. The meetings also dealt with the character and volume of future Seaway traffic, the various considerations that enter into the determination of the rate base for tolls and the assessment and collection of tolls. There is a tolls committee for Canada and one for the United States.

In May a joint announcement by the heads of the Canadian and United States Seaway entities stated that they had been exploring various bases for assessing tolls with a view to developing a formula to achieve the following objectives:

1. Procedural simplicity which will minimize the cost of collection and expedite the dispatching of vessels.

2. Recovery of the cost of the Seaway and its operation on a basis that will provide for economical rates to users and will encourage traffic.

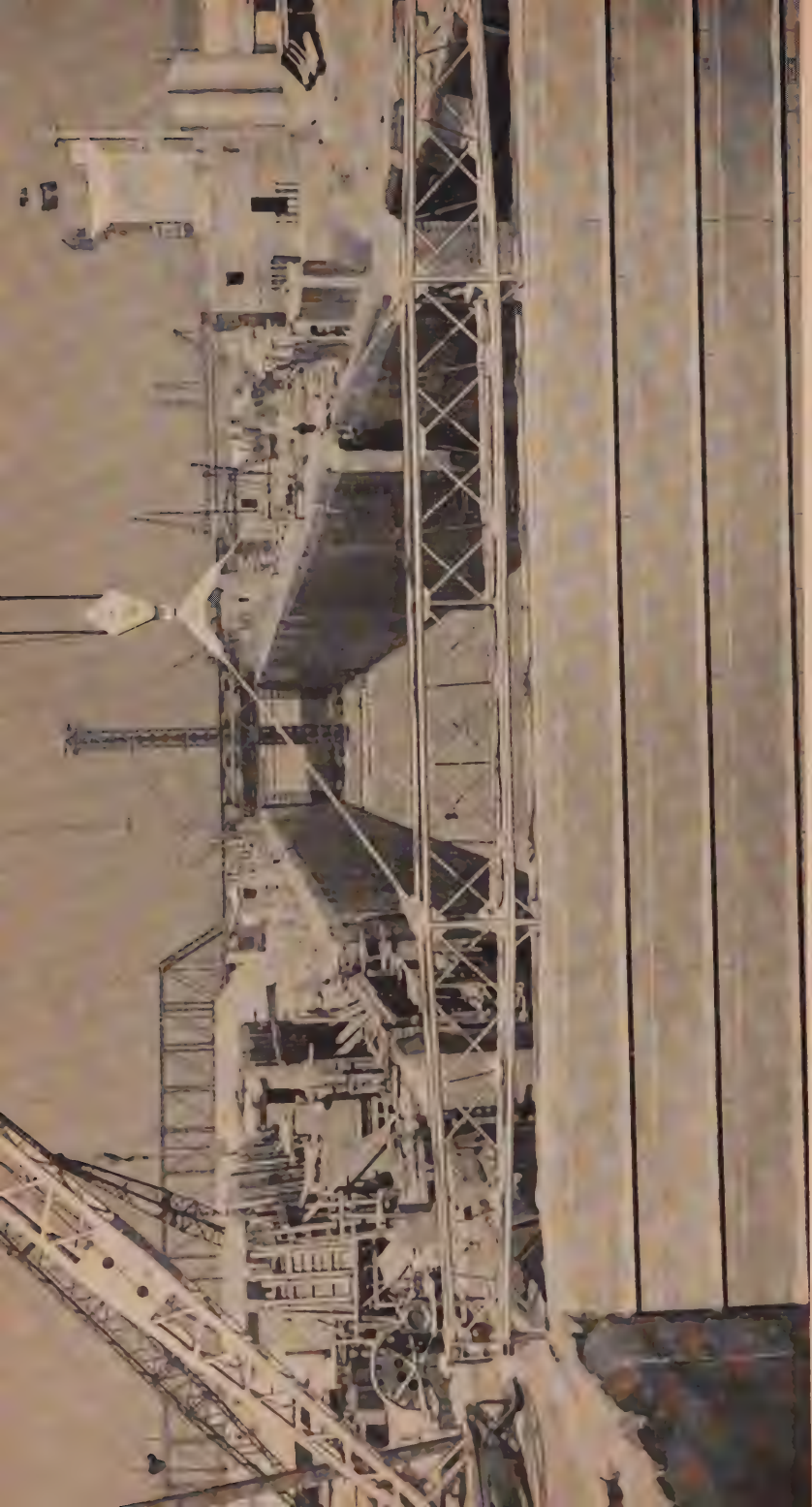
As a result of their studies of the toll structures of other international waterways and of pertinent maritime rules and practices, the committees had under consideration a composite basis of toll assessments as being most suitable to meet the above-mentioned requirements. Such a toll structure would encompass an assessment per ton of cargo or its equivalent, together with an assessment on a vessel's registered tonnage.

The United States Committee held a conference on September 9 at Washington and on September 11 at Chicago. A similar conference was held by the Canadian Committee at Ottawa on September 19. The main purpose of these conferences was to give an opportunity to the organizations concerned to submit their suggestions concerning the measurement of vessels, and generally, the efficient and adequate methods of determining and paying toll charges.

Ship Dimensions Approved

During 1957 The St. Lawrence Seaway Authority and its United States counterpart gave further consideration to the formulation of standards and procedures for the efficient operation of the Seaway and the expeditious dispatch of Seaway traffic, having also due regard for the safety of navigation and property.

The conclusions have been reached that the maximum vessel dimensions compatible with the attainment of the foregoing objectives in all respects in the normal handling of traffic on the Seaway would be an overall length of 715 feet and a beam of 72 feet.



Here is the St. Lambert Lock being built near Victoria Bridge on Montreal's South Shore. This lock is the most easterly of seven being built for the Seaway of which five are in Canada and two in the United States. It will raise or lower vessels a distance of 15 feet, the difference in level between the waters of the Montreal Harbour and those of the Laprairie Basin. A vertical lift span will replace the section of the Victoria bridge directly above the lock to provide the necessary 120 foot overhead clearance for shipping.

With a view to accommodating all shipping as far as possible, the Seaway entities have explored ways and means of making the Seaway available to vessels of larger dimensions on a basis that will not be inconsistent with the above-mentioned objectives. Consideration was given in this connection to ship dimensions approved for the St. Mary's Falls Canal and Locks as well as to distinctive factors applicable in the case of various canals and locks of the Seaway, inclusive of the Welland Ship Canal.

The conclusion was reached that ships having an overall length up to 730 feet and a beam up to 75 feet can be accommodated in the Seaway, subject to the proviso that vessels exceeding 715 feet in length or 72 feet in beam should be classified in the category of vessels having characteristics which will subject them to appropriate scheduling and handling so as not to interfere with other traffic whenever the transit of such vessels is unduly delaying the transit of other shipping.

STATUS OF THE PROJECT AS OF DECEMBER 31, 1957

The peak of employment was reached in July, with some 6,455 contractors' personnel engaged on the project.

As of December 31, 1957, all major construction contracts, totalling some 90, have been awarded and of these 27 were completed. In addition, 42 contracts had been awarded for the supply of major components required for locks, bridges and ancillary machinery. Of these, eight were completed and the remainder progressing to requirement.

The construction phase of the project passed the half-way mark and the four principal categories of work stand as follows:

Excavation	80% completed
Dredging	56% completed
Concrete placed	87%
Structural and machinery steel installed ..	19%

LACHINE SECTION

Excavation and Construction of Locks

(1) At a point downstream from the Jacques Cartier Bridge, at the entrance to the Seaway a contractor was engaged on the excavation of a channel (including dyke construction) some 4,900 feet in length involving the removal of 2,000,000 cubic yards of material of which 500,000 cubic yards were rock. The contract was completed in the Fall of 1957.

(2) Channel excavation and dyke construction from Jacques Cartier Bridge towards Victoria Bridge for a distance of some 7,600 lineal feet—being work under St. Lawrence Seaway Authority Contract No. 1—was 97% complete at the end of 1957.

(3) The St. Lambert Lock and approaches are being built at Victoria Bridge. This will be the most easterly lock of the Seaway and is located at the South Shore end of the Bridge.



The Cote Ste. Catherine Lock is being built near the Lachine Rapids, upstream from Montreal. It will raise or lower vessels a distance of 30 feet to overcome a difference in level between the Laprairie Basin downstream and Lake St. Louis a short distance upstream. View is downstream.

The contract includes the construction of the lock and excavation extending some 5,000 feet and required the removal of some 2,400,000 cubic yards of material. The contractor has now completed 91% of the work, including the lock itself where the installation of equipment is in progress.

First stages for the installation of mitre gates as well as other mechanical features needed for this lock are now in progress.

The construction of regulating works and roadway underpass at St. Lambert Lock was undertaken under contract awarded May 31, 1957. The regulating works are required for the control of the water level of the pool above the lock. The underpass is required as a construction passage through the approach embankment at Victoria Bridge. Work under this contract was essentially completed in 1957.

(4) Upstream from St. Lambert Lock, some seven miles of excavation of channel and construction of dyke in the Laprairie Basin stretching around to the site of the Cote Ste. Catherine Lock is in progress.

(a) The most easterly of the two lengthy channel and dyke contracts calls for the excavation of 20,000 lineal feet of channel and construction of the requisite dyke. It also includes the construction of a turning basin for ships and the extension of the water intake for the City of St. Lambert. Excavation required is 2,000,000 cubic yards of rock and nearly 5,000,000 cubic yards of common excavation. It is nearing completion.

(b) Continuing westerly, the next contract covers channel and dyke for 15,500 feet, involving excavation of some 1,200,000 cubic yards of rock and some 2,500,000 cubic yards of common material; it is to be completed by August 31, 1958.

(5) Adjoining this work is that of the construction of Cote Ste. Catherine Lock and approaches. This and the St. Lambert Lock are the two to be built in the Lachine Section of the Seaway. Awarded August 26, 1955, this contract is to be completed by July 31, 1958.

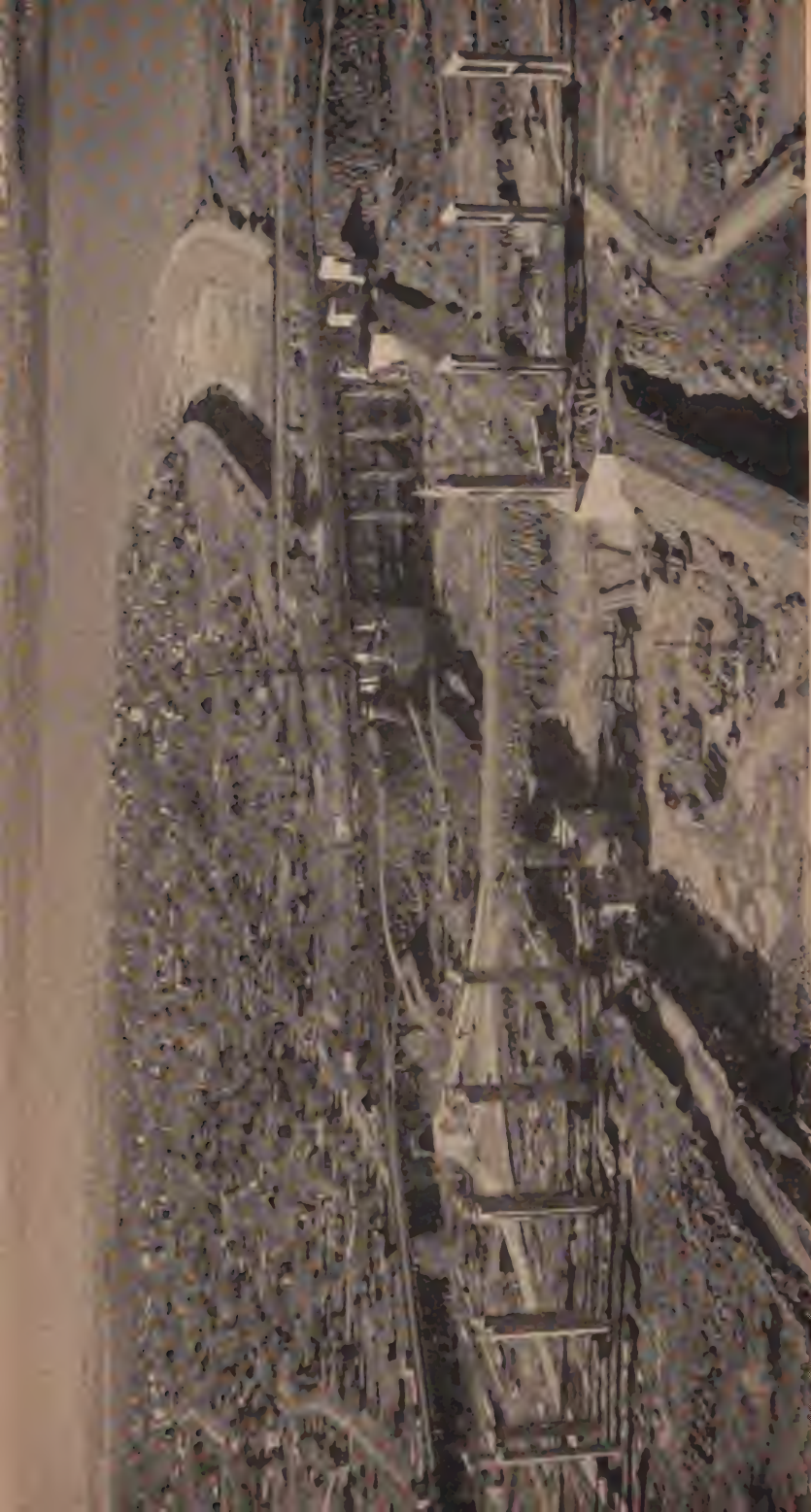
The work extends a distance of 10,500 lineal feet and in addition to construction of the lock consists of excavation of a navigation channel and the construction of dykes which form the approaches to the lock. It also includes the excavation of a turning basin downstream from the lock, the construction of regulating works for the control of the water level of the upper reach of the canal and the formation of a reservoir pool upstream from the lock.

Common excavation required by this contract amounts to some 2,800,000 cubic yards, rock excavation to some 1,600,000 cubic yards.

Approximately 2,495,890 cubic yards of common excavation and 1,506,000 cubic yards of rock excavation have so far been removed.

The pouring of concrete for the lock walls started on July 1, 1956 as scheduled and was completed in late December 1957.

The erection of the mechanical features for the lock is underway. Bridge assembly is advanced on the rolling lift bridge being built at the upstream end of the lock. Preparatory work for the installation of the lock gates is now in progress.



Just downstream of the Indian village of Caughnawaga this photo gives some idea of the diversity of work being done to prepare the Seaway for its opening in 1959. In middle ground, piers are being erected to support the new southern span and approaches of the Messier Merz air Bridge that will provide a permanent overhead clearance of 120 feet for shipping. From bottom to top is a portion of the 10 mile long overland canal which begins at Cote Ste. Catherine, near the LaSalle Rapids, and extends to Lake St. Louis, seen at top where dredges are preparing a navigable channel. Also, under the Honoré Mercier Bridge, the Canadian Pacific Railway Caughnawaga Bridge is also being modified to provide the necessary clearance. Here, vertical lift spans will be installed.

(6) A contract for approximately 5,000 lineal feet of channel from the westerly limits of the Cote Ste. Catherine Lock upstream in the direction of the Indian Reserve of Caughnawaga was scheduled for completion on October 30, 1956, and was finished eight months ahead of time.

At the location of the above mentioned contract there is being constructed the Cote Ste. Catherine Wharf and water intake for the municipalities of Cote Ste. Catherine, Delson and St. Constant. This work is being done under contract awarded in September 1957. It will provide approximately 4,200 feet of concrete wharf on the South side of the Seaway channel. It is to be completed by June 30, 1958.

(7) Proceeding in a westerly direction further overland to a point immediately east of the Honore Mercier Bridge, another excavation contract for channel 14,000 feet in length and involving 19,000 lineal feet of dyke was awarded in December 1955 and progressed satisfactorily during 1957. It includes 4,600,000 cubic yards of common excavation of which 2,885,674 cubic yards have been completed and 2,900,000 cubic yards of rock excavation of which 2,124,902 cubic yards have been completed. This contract is scheduled for completion on September 30, 1958.

(8) Another excavation contract, including embankments and the C.P.R. Bridge sub-structure, was awarded in the early Fall of 1956. As of December 31, 1957, the contractor had completed 71% of the work.

(9) The last excavation contract in the Lachine Section is located entirely in the Caughnawaga Indian Reserve. It involves 11,500 lineal feet of excavation and the construction of an entrance dyke extending an additional 3,500 feet into Lake St. Louis. As of December 31, 1957, the work virtually completed is some nine months ahead of schedule.

Dredging

(1) A contract awarded in May 1956 for dredging the approach to the Seaway channel from Montreal Harbour is scheduled for completion in 1958. It is progressing satisfactorily.

(2) For the Seaway channel in Lake St. Louis, a contract for removal of 3,800,000 cubic yards of overburden and 100,000 cubic yards of solid rock was awarded March 23, 1955.

Scheduled for completion on August 31, 1958, this contract is now 85% completed.

Bridges

(1) The Jacques Cartier Bridge: The construction of the Seaway channel along the South Shore of the St. Lawrence River in the Lachine Section, directly opposite the City of Montreal, involves extensive modifications to the foundations, superstructure and southern approaches of this bridge.

The Seaway channel will intersect the bridge structure between piers No. 9 and 10 at which point it is necessary to provide 120 feet clearance above high water level to allow ships to pass up and down the channel.

The bridge structure had a clearance of approximately 40 feet between the lower chord of the deck truss span and high water level.

The deck truss span was removed and a new through truss span set in its place thus providing 30 feet of the 80 foot increase in vertical clearance required. False work was built downstream of the bridge and the new span was erected on falsework upstream of the main structure.

The supports of both spans were set on rollers, moving upon a system of rails. By means of hydraulic jacks the 1,500 tons of the old span and the 1,600 tons of the new one (each span 250 feet in length) were moved in a horizontal direction downstream a distance of 78 feet. The new span was then secured in place and the old one dismantled. The whole operation which took place on October 20, 1957 lasted four and one half hours.

The adjoining bridge spans on each side of the Seaway channel will be raised varying amounts to produce a gradual maximum grade on the traffic lanes of 4.2 per cent. Contracts providing for this work and for the enlargement of the Bridge Piers are on schedule and should be completed around October 30, 1958.

(2) Victoria Bridge: Canadian National Railways' engineers and those of the Seaway Authority have found a solution to the problems raised by this bridge. They have agreed upon a plan which involves the use of canal dykes and embankments to permit uninterrupted vehicular traffic across the Seaway. At the same time, a diversionary bridge for railway purposes will be built by the Canadian National Railways. Uninterrupted highway traffic at the Seaway crossing is being provided for by the simple arrangement of two lift spans, one at Victoria Bridge and the other at the upper end of St. Lambert Lock, located just above Victoria Bridge. A contract for the construction of these lift bridges at St. Lambert Lock was awarded in late December 1956.

The new southern approaches to the Victoria Bridge were completed in mid-November 1957. The new road system was then put into operation diverting the traffic away from the most landward span of the Victoria Bridge. This span is now being dismantled and will be replaced by a vertical lift, as mentioned above.

(3) Honore Mercier Bridge: Because of the increase in the volume of traffic over this bridge completed in 1935 by the Lake St. Louis Bridge Commission, an agency of the government of the Province of Quebec, The St. Lawrence Seaway Authority decided to elevate the southerly part of the bridge over the ship channel which, at this point, passes through a portion of the South Shore in the Caughnawaga Indian Reserve. The bridge, as modified, will be an overhead bridge with modern and appropriate approaches on the South Shore having 26 foot wide modern divided highways and grade separations. The new approaches will have separate ramps, one for eastern traffic and one for western traffic.

The contract awarded in early 1957 for the substructure is now complete, and, at year's end, the erection of steel for the superstructure had commenced, and completion is expected in August 1958.

(4) Canadian Pacific Railway Bridge: A contract was awarded at the end of 1956 for the superstructure of two vertical lift bridges to be installed in the embankment leading to the Canadian Pacific Railway Bridge upstream from Honore Mercier Bridge.

At the end of 1957, the first lift span was erected, and work was progressing on the erection of the towers.

Remedial Works

Because of the construction of the Seaway, remedial works are required on the South Shore in the Lachine Section. These remedial works include water supply and sewers for the Municipalities of Longueuil, Montreal South, Jacques Cartier, St. Lambert, Preville, Laprairie and Cote Ste. Catherine. Contracts for these remedial works include the following:

(a) Construction of a pipeline for water intake for the Municipalities of Longueuil and Jacques Cartier. This contract is 91% complete.

(b) Construction of a water intake for the Municipalities of Longueuil and Jacques Cartier. This contract is now complete.

(c) Construction of a collector sewer and outfalls for the Municipalities of Montreal South, Jacques Cartier, St. Lambert and Preville. This contract is 99% complete.

(d) Construction of a new water intake and sewer outfall for the Town of Laprairie as well as facilities for future installation of a water intake for the Cote Ste. Catherine area.

SOULANGES SECTION

Following the adoption by the Authority of a general scheme for the proposed locks and canal to be constructed at Melocheville to lift ships from Lake St. Louis to the Beauharnois Canal (already dredged to the required 27 foot depth) contracts were awarded for the excavation and construction of locks.

Excavation and Construction of Locks

(1) A contract was awarded in 1956 for the first stage construction of the Lower and Upper Beauharnois Locks and Approaches. The total estimated cubic yardage to be excavated on this contract was 1,455,000 cubic yards. This contract has been completed.

(2) Upon completion of the above-referred to contract, the contractor started work for the construction of the Lower Beauharnois Lock and Approach. This lower lock together with the upper lock near the Beauharnois Canal will provide an 82 foot lift. This contract includes the construction of the lock and excavation of 120,000 cubic yards of common excavation and 1,600,000 cubic yards of rock excavation. It also includes the construction of a tunnel at the upper end of the Lower Beauharnois Lock to ensure uninterrupted traffic on the highway to and from Valleyfield. This four-lane tunnel is now complete. The lock contract was 84% completed on December 31, 1957, and is scheduled to be finished on November 30, 1958.

(3) Also scheduled for completion on November 30, 1958, is another contract for the Upper Beauharnois Lock and Approaches. This contract includes construction of the lock and excavation of 970,000 cubic yards of common excavation and 1,450,000 cubic yards of rock excavation. To date 64% of the contract has been completed.

(4) A fourth contract was awarded for the production of 1,100,000 cubic yards of concrete aggregates of different sizes and of sand to be used in the making of concrete for the two Lower and Upper Beauharnois Lock structures.



The complexity of work going forward at Melocheville, P.Q. for the construction of two giant Seaway locks is seen below. At the bottom is Lake St. Louis, beyond lie the work sites for construction of the Lower and Upper Beauharnois Locks being built by the St. Lawrence Seaway Authority. They will lift ships 84 feet from Lake St. Louis to a navigation channel in the Beauharnois Canal seen at top. In this canal they will sail 16 miles to the open waters of Lake St. Francis.

Bridges

Three bridges exist on the Beauharnois Canal—The Melocheville Bridge for the New York Central, the St. Louis Bridge and the Valleyfield Bridge both for railway and highway traffic. Contracts have been awarded for the supply and erection of vertical lift bridge spans for both the St. Louis and Valleyfield bridges, and for a Swing Bridge at Melocheville. These contracts are progressing in accordance with schedules.

LAKE ST. FRANCIS SECTION

Dredging

On March 23, 1955, three contracts were awarded for the dredging of the Seaway channel through Lake St. Francis. The contract for dredging the western approach to the Beauharnois Canal, calls for the removal of 1,100,000 cubic yards of sand, silt and clay. At the end of the year this contract was 40% completed.

The dredging of 600,000 cubic yards of sand, silt and clay at Lancaster Bar is now completed.

The contract for the dredging of the channel from Fraser Point to Cornwall involves the removal of 2,700,000 cubic yards of overburden. At the end of 1957 this contract was 86% completed.

INTERNATIONAL RAPIDS SECTION

Construction

On February 11, 1955, the Authority awarded a contract for the construction of a canal and lock at Iroquois Point, Ontario. This lock is the most westerly one to be built on the Seaway. It was completed in concrete in August of 1957 following the excavation of 4,500,000 cubic yards of material. In late November, following the installation of the mechanical features it underwent the last in a series of tests to become the first completed lock of the Seaway.

Dredging

Following the decision by the Canadian Government that the dredging in the North Channel would take the form of a navigation channel which would bring deep navigation to Cornwall and would also be useful in the future, a contract was awarded late in 1956, involving the excavation of 290,000 cubic yards of common excavation and 214,000 cubic yards of rock excavation.

Arrangements have also been made between the two Seaway entities with respect to the division of the work required to be done in the South Channel. In this respect, a contract was awarded for dredging and channel improvements in the South Channel at Cornwall Island. The same contractor also has compensation excavation work in the North Channel for flow distribution. This contract scheduled for completion by November 30, 1958 stood, at year's end at 18% completed.

Also, in February 1957, a contract was awarded for dredging 27 foot approaches to the Iroquois Lock. This contract, now 30% completed, is scheduled to be finished by November 30, 1958.



The Iroquois Lock, the most westerly of seven new locks being built for the St. Lawrence Seaway received its final test, November 22, 1957, as the Canadian Government Ship Grenville was raised and lowered in the lock chamber. This lock will provide access between the power pool (in the International Rapids Section of the Seaway) and the Thousand Islands Section of the St. Lawrence River leading west to Lake Ontario. The Iroquois Lock has a length of 768 feet, a width of 80 feet and 30 feet of water over the sills. It is the first major completed structure of the Seaway.

Excavation

A contract was awarded February 1957, for excavation on the South Channel at Cornwall Island. To date the contractor has removed 1,264,880 cubic yards of common excavation for a progress figure of 45%. Scheduled completion for this contract is October 31, 1958.

Bridges

A new high level suspension bridge to span the South Channel of the St. Lawrence River at Cornwall Island is being constructed by the two Seaway entities, The St. Lawrence Seaway Authority, and the Saint Lawrence Seaway Development Corporation of the United States. The new high level bridge will provide a two-lane highway and walkway for pedestrians. It will have no railroad right of way. Canada's contribution is the construction of the substructure for which a contract was awarded in November of 1956. The contract is now 94% completed. The U.S. entity will begin work on the superstructure early in 1958. The bridge is expected to be completed in late 1958.

Last October, the Seaway Authority and the Seaway Development Corporation announced that they had acquired all the shares of the Cornwall International Bridge Company Ltd. This company operated the Roosevelt International Bridge across the St. Lawrence River from Cornwall, Ont. to the U.S. mainland near Rooseveltown, N.Y. The two entities will share equally in the ownership and operation of the bridge company.

It is the present south channel section of this bridge that is to be removed and replaced by the new high level bridge.

Beginning April 1, 1958, temporary ferry crossing facilities will be provided between the U.S. mainland and Cornwall Island to assure uninterrupted traffic over this international crossing.

To this effect a contract was awarded last October for the construction of a ferry landing and access roads. This contract is now 96% complete.

Headquarters in Cornwall

Work on the Headquarters Building at Cornwall is progressing satisfactorily. This building will be ready for occupancy in April, 1958.

THOUSAND ISLANDS SECTION

A contract was awarded in the late Fall of 1957 for dredging in the Thousand Islands Section. Work on this contract was suspended for the Winter.

WELLAND CANAL SECTION

To provide the requisite 27 foot depth throughout, The St. Lawrence Seaway Authority is deepening the canal by dredging and dry excavation.

Contracts awarded for the dredging from 25 to 27 foot depth of some portions of the canal include some four miles of work near Port Colborne, extending some two and a half miles above Lock 8, to Lake Erie and the Port Colborne breakwater, and a mile and a half below Lock 8. These two contracts are to be completed on September 30, 1958.

A contract awarded in December 1956 for suction dredging at the entrance to the canal from Lake Ontario to Lock 1 is completed. A second contract for rock dredging in the same location was awarded in the late Fall of 1957.

Three contracts were awarded for channel excavation in the dry. Two of these contracts, from Lock 1 to Lock 2 and from Lock 3 to Lock 4, have been completed. A third contract between Lock 2 and Lock 3 is nearing completion.

GENERAL

During the year 1957, additional contracts were awarded for the supply and installation of operating equipment on all works of the St. Lawrence Seaway, bringing to \$20,825,409 the total cost of such contracts. They include service bridges at locks of the Seaway and such varied material as stiff-leg derricks, stop logs, pick-up booms, sector gates, mitre gates, wire rope fenders, generator standby sets, electrical cubicles, electrical control desks, unwatering and sump pumps, valve operating machines, mooring bollards, electrical motors, limit switches, line haulers, light standards, coping guards for locks, control houses, electric substations, bulkheads, steel spiral stairways, valve position indicators, portable diesel driven pumps, taintor valves, and electrical works for the operation of lock gates, valves and fenders.

FINANCE

Contracts awarded for construction work and for lock machinery and equipment, as at 31st December, 1957, totalled approximately \$244,000,000, against which there had been recorded expenditures amounting to \$144,500,000, leaving outstanding commitments of \$99,500,000.

Seaway construction is financed by loans from the Government of Canada. During the corporation's fiscal year January 1—December 31, 1957, loans totalling \$95,000,000 were received, and the total of loans received and outstanding at 31st December, 1957, amounted to \$152,000,000. Interest rates charged by the Department of Finance on these loans have varied, being influenced by the cost of Government borrowings. Details of loans to the Authority are:—

April 1955	— March 1956	\$21,500,000	@	3 $\frac{1}{4}$ %
June 1956	— March 1957	\$56,000,000	@	3 $\frac{3}{8}$ %
May 1957	— November 1957	\$54,500,000	@	4 $\frac{1}{8}$ %
November 1957	— December 1957	\$20,000,000	@	4 $\frac{3}{8}$ %

By arrangement, payment of interest on construction loans is deferred until the end of the first year of Seaway operation.

When the Seaway is in operation, tolls will be charged to produce revenue to meet payment of operating and maintenance expenses, interest on borrowings, and amortization of capital, as required by the St. Lawrence Seaway Authority Act, 1951.

Included in this report is a comparative Balance Sheet of the Authority at 31st December, 1957, certified by the Auditor General of Canada; together with the following supporting schedules:—

- (a) Assets acquired or in course of construction
- (b) Construction and Administrative Facilities
- (c) Administrative and Engineering Expenses (deferred—to be distributed on completion of construction)

OTTAWA, March 24, 1958.

The Honourable GEORGE HEES,
Minister of Transport,
Ottawa.

Sir,

The accounts and financial statement of The St. Lawrence Seaway Authority have been examined for the year ended December 31, 1957. In compliance with the requirements of section 87 of the Financial Administration Act, I now report that, in my opinion:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statement of the Authority
 - (i) was prepared on a basis consistent with that of the preceding year and is in agreement with the books of account, and
 - (ii) the financial statement gives a true and fair view of the state of the Authority's affairs as at the end of the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

IAN STEVENSON,
(for) *Auditor General.*

(Established by the St. Lawrence Seaway Authority Act)

(with comparative figures as at December 31, 1956)

Assets	1957 \$	1956 \$
Cash	418,954	246,721
Advances, Deposits, etc.,	372,865	181,307
Bonds and Cash held as Con- tractors' Security Deposits	11,774,732	8,788,607
Investment in shares of Corn- wall International Bridge Co., Ltd.	200,000	—
Capital Expenditures: Assets acquired or in course of construction (Schedule “A”)	\$ 153,979,835	60,716,758
Field buildings, equipment, etc., at cost, less depre- ciation absorbed (Schedule “B”)	756,331	528,052
Inventory of lock mach- inery and equipment at cost	1,294,426	127,167
Inventory of materials, small tools and equipment, at cost	282,903	233,841
Deferred administrative and engineering expenses (Schedule “C”)	9,509,964	4,862,093
Interest on loans	4,769,190	1,197,157

Liabilities	1957 \$	1956 \$
Accounts Payable	7,239,558	1,593,398
Provision for reimbursement to the Re- ceiver General of Canada, of costs in- curred for preliminary engineering surveys, investigations and design, and for equipment, supplied by Government departments	6,008,305	4,899,566
Contractors' Holdbacks	11,774,732	8,788,607
Contractors' Security Deposits (contra) ..	—	—
Loans from the Government of Canada under section 25 of the Act, including interest	156,743,207	58,171,175
	\$ 183,359,200	\$ 76,881,703

NOTE: Outstanding commitments under uncompleted construction contracts as at December 31, 1957, amounted to approximately \$100,000,000.

Certified correct:

D. W. G. OLIVER,

Comptroller.

Approved:

B. J. ROBERTS,

Certified in accordance with my report dated March 24, 1958 to the Minister of Transport, under section 87 of the Financial Administration Act.

IAN STEVENSON,
(for) Auditor General of Canada.

THE ST. LAWRENCE SEAWAY AUTHORITY

Assets acquired or in Course of Construction to December 31, 1957

	Lachine (Laprairie) Section	Soulanges Section	Lake St. Francis Section	International Rapids Section	Thousand Islands Section	Welland Section	General	Total
Engineering Surveys, etc.—								
Preliminary engineering surveys, investigations and design by the Department of Transport (subject to analysis and distribution to sections affected)	—	—	—	—	—	—	\$ 1,515,027	\$ 1,515,027
Field charges, including surveys, hydraulic investigations, etc.	379,041	\$ 107,106	\$ 53,477	\$ 139,968	—	\$ 41,015	9,852	730,459
Professional services for special surveys and investigations	346,792	—	—	—	—	—	—	346,792
Hydraulic model building and models	—	—	—	—	—	—	831,160	831,160
Land—Right of Way	5,153,807	610	—	426,731	—	—	—	5,581,148
Seaway Office Building, Cornwall	—	—	—	—	—	—	1,418,689	1,418,689
Bridges—Acquisition, new construction and alterations to existing structures	11,096,549	40,126	—	2,310,521	—	—	—	13,447,196
Channel Excavation and Construction of Dykes	42,321,233	—	4,797,530	4,582,152	\$ 55,165	9,508,836	—	61,264,916
Relocation of Roads, Water Intakes and Sewers	3,397,558	84,767	—	408,825	—	—	—	3,891,150
Canal Locks (including machinery and equipment valued at \$50,068,366)	25,592,518	24,073,892	—	14,968,873	—	—	318,015	64,953,298
	88,287,498	24,306,501	4,851,007	22,837,070	55,165	9,549,851	4,092,743	153,979,835

NOTE: The amounts shown in the above Schedule include charges for depreciation on certain field buildings, shore and floating equipment to a total of \$114,455.

Schedule "B"

THE ST. LAWRENCE SEAWAY AUTHORITY

*Field Buildings, Equipment, etc.,
as at December 31, 1957*

	<i>Cost</i>	<i>Depreciation Absorbed</i>	<i>Book Value</i>
Field Buildings—			
Completed	\$ 178,537	\$ 69,908	\$ 108,629
In progress	18,086	—	18,086
Shore Equipment, including field motor vehicles	181,421	50,298	131,123
Floating Equipment	267,964	43,185	224,779
Automobiles	9,688	2,990	6,698
Office Furniture and Equipment	349,041	82,025	267,016
	<u>\$ 1,004,737</u>	<u>\$ 248,406</u>	<u>\$ 756,331</u>

Schedule "C"

THE ST. LAWRENCE SEAWAY AUTHORITY

*Deferred Administrative and Engineering Expenses
as at December 31, 1957*

Salaries of Members and executive officers	\$ 333,244
Other salaries and wages	6,544,265
Contributions to Public Service Superannuation Account and Employees' Welfare Plan	374,807
Consultants' and analysts' fees	190,804
Printing, stationery and office supplies	400,970
Travel	295,113
Office accommodation—rentals and alterations	233,380
Depreciation on office furniture and equipment	82,025
Field buildings and automobiles—operation and maintenance (including depreciation, \$51,926)	425,571
Plan reproduction	265,552
Information services and public relations	93,369
Miscellaneous	270,864
	<u>\$ 9,509,964</u>

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CANADA

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Annual Report

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1958



The St. Lawrence Seaway Authority

CANADA

ANNUAL REPORT

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1958

THE ST. LAWRENCE SEAWAY AUTHORITY

THE QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1959

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THE ST. LAWRENCE SEAWAY AUTHORITY

March 31, 1959.

The Honourable GEORGE HEES,
Minister of Transport,
Ottawa, Ontario.

Dear Sir:

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1958, to December 31, 1958, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

B. J. ROBERTS,
President.

THE ST. LAWRENCE SEAWAY AUTHORITY

B. J. ROBERTS, C.B.E.,
President

J.-C. LESSARD,
Vice-President

C. W. WEST, P. Eng.,
Member

Executive Officers

P.E.R. MALCOLM *Secretary and Director of Administration*
A. G. MURPHY *Chief Engineer*
R. J. BURNSIDE *Director of Operation and Maintenance*
D. W. G. OLIVER *Comptroller*
LUC COUTURE *Counsel*

THE ST. LAWRENCE SEAWAY AUTHORITY

ANNUAL REPORT 1958

The St. Lawrence Seaway Authority is a corporation established by the St. Lawrence Seaway Authority Act, at the 2nd Session of Parliament, 1951, C. 24. This Act was proclaimed and the appointment of its Members made public on July 1, 1954. The Act is now Chapter 242, R.S.C., 1952. The Authority is incorporated for the purposes of:

- (a) acquiring lands for and constructing, maintaining and operating all such works as may be necessary to provide and maintain, either wholly in Canada or in conjunction with works undertaken by an appropriate authority in the United States, a deep waterway between the Port of Montreal and Lake Erie;
- (b) constructing, maintaining and operating all such works in connection with such a deep waterway as the Governor in Council may deem necessary to fulfil any obligation undertaken or to be undertaken by Canada pursuant to any present or future agreement;
- (c) acquiring lands for, and constructing, maintaining and operating, alone or jointly or in conjunction with an appropriate authority in the United States, bridges connecting Canada with the United States as authorized by this Act, and in connection therewith, or as incidental thereto, acquiring with the approval of the Governor in Council shares or property of any bridge company and operating and managing bridges; and
- (d) acquiring lands for, and constructing or otherwise acquiring, maintaining and operating such works or other property as the Governor in Council may deem to be necessarily incidental to works undertaken pursuant to this Act.

For the above purposes, the Authority has the capacities and powers of a natural person as if it were a corporation incorporated for such purposes by Letters Patent under the Great Seal of Canada. Its powers under its Act may be exercised only as an agent of Her Majesty concerned with the construction, maintenance and operation of the St. Lawrence Seaway between the Port of Montreal and Lake Erie as well as all such canals or works similar or related to the works described above as are entrusted to it by the Governor in Council.

Construction

All major construction contracts totalling some 143 have been let and of these 131 are virtually completed. In addition, of the 42 contracts awarded for the supply of major components required for locks, bridges and ancillary machinery, 40 are virtually completed and the remaining 2 rapidly nearing completion.

The status of the four principal categories of construction work as at the year's end was as follows:—

Excavation	96.9%
Dredging	77.6%
Concrete placed	99.4%
Structural and machinery	98.2%



The entrance to the St. Lawrence Seaway at Montreal Harbour looking westward, with the Jacques-Cartier Bridge in the foreground and the Victoria Bridge in the background.

Initial watering and testing of the South Shore and Beauharnois locks took place on the following dates:—

St. Lambert	September 29, 1958
Cote Ste. Catherine	October 16, 1958
Lower Beauharnois Lock	November 10, 1958
Upper Beauharnois Lock	November 22, 1958

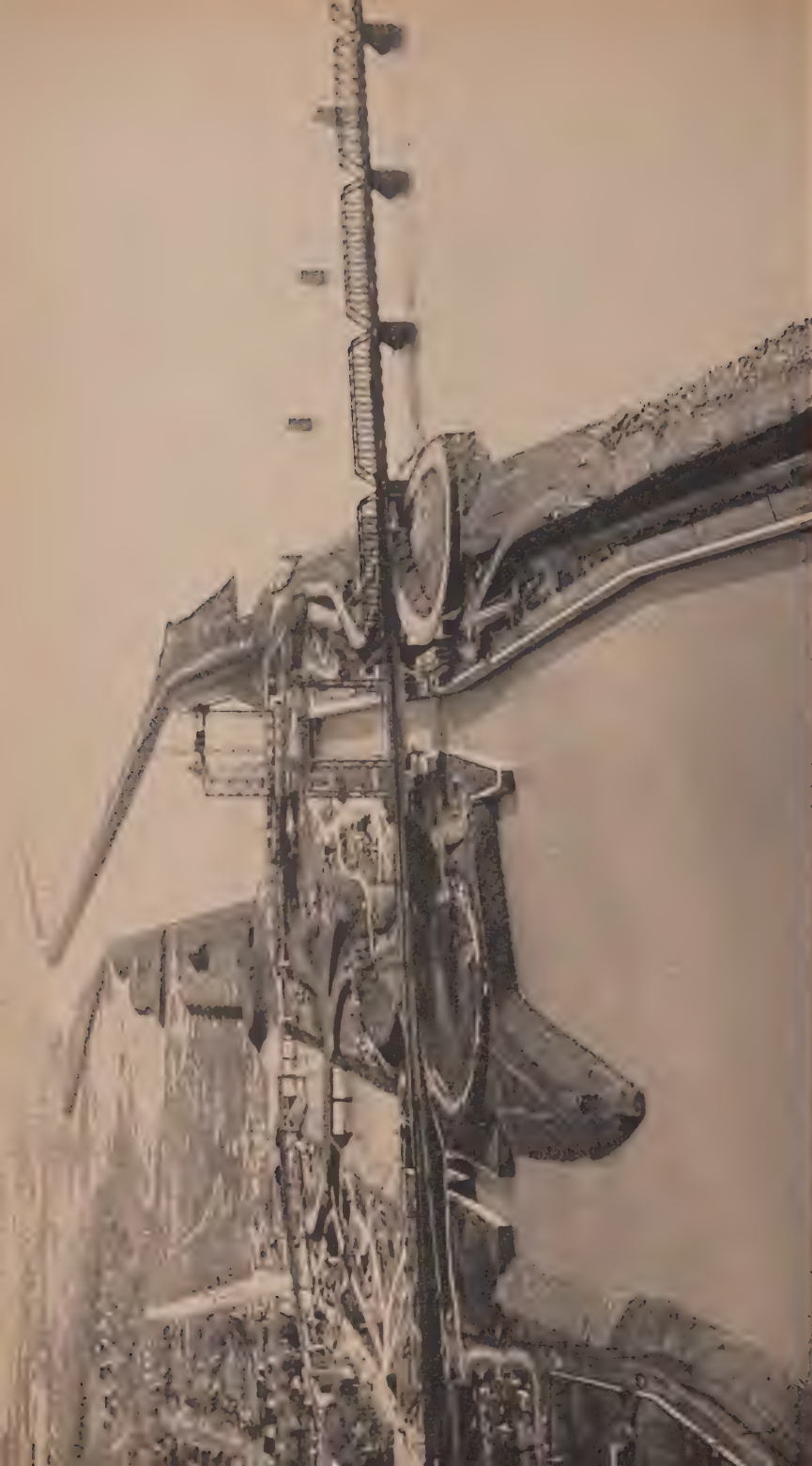
During the year the work required for the modification of the Jacques Cartier Bridge, the extension of the Honoré Mercier Bridge and the construction of the Cornwall Island High Level Bridge was completed.

Work on the movable bridges at St. Lambert, Cote Ste. Catherine, Caughnawaga, Melocheville and Iroquois was either completed or virtually completed by the end of the year.

The vertical lift spans at St. Louis and Valleyfield were placed in position in October 1958 and put into use as fixed spans. The erection of the towers has been proceeding and lift spans are scheduled to be in full operation for the opening of navigation in 1959.

During 1958 major construction contracts in excess of \$100,000 were awarded as follows:—

Contract	Contractor	Amount
Extension to Sewer Outfall Municipality of Laprairie, Lachine Section	Roy Robertson Excavation & Foundation Co. Limited, Boucherville, Que.	\$125,185
Supply of Sewage Pumps & Accessories at Montreal South Sewage Pumping Station, Lachine Section	Canadian Fairbanks-Morse Co. Limited, Montreal, Que.	\$143,541
Supply & Installation of Transmission Lines and Series Lighting on Lachine and Soulanges Sections	Standard Electric Co. Inc., Montreal, Que.	\$186,000
Lower Highway Bridge over Regulating Channel St. Lambert Lock, Lachine Section	Chas. Duranceau Limitée, Montreal, Que.	\$186,328
Excavation—Cornwall Island, North Channel and Completion of Regulating Channel, International Rapids Section	C. A. Pitts General Contractor Ltd., Toronto, Ont.	\$1,378,830
Supply and Operation of Dredging Plant—Station 710+00 to 1231+00, Welland Ship Canal	J. P. Porter Co. Limited, Montreal, Que.	\$140,400
Second Stage Construction, Montreal South Sewage Pumping Station, Lachine Section	J. G. Fitzpatrick Limited, Montreal, Que.	\$257,610



A view of the St. Lambert Lock with a lift span forming part of the Victoria Bridge in the foreground and another lift span at the upper end of the lock. To the left of the lock may be seen the approaches to the bridges, the lock area and the regulating works. The canal in the background passes through the Laprairie Basin to the Cote Ste-Catherine Lock.

Contract	Contractor	Amount
Construction of a Snubbing Wharf, Upper Beauharnois Lock, Soulanges Section	McNamara (Que.) Limited, Montreal, Que.	\$263,368
Supply of Steel Sheet Piling for the Construction of Snubbing Wharf at Upper Beauharnois Lock, Soulanges Section	Hydro-Electric Power Commission of Ontario, Toronto, Ont.	\$139,488
Construction of Dyke Closure Across Abandoned Galop Canal, Iroquois Lock, International Rapids Section	Harvey Construction Co. Ltd., Kingston, Ont.	\$103,770

Operations

The Iroquois Lock at Iroquois Point, Ontario, was completed in the fall of 1957 and was in operation during 1958. Operation commenced on May 26 and continued until the official closing date of December 6, except for the period between June 30 and July 3 while the water level in the power pool above Barnhart Dam was being raised. From May to December 1958, 6,550 vessels passed through the lock. The tonnage of cargo was 5,633,250 down-bound and 3,858,586 upbound, for a total of 9,491,836 tons.

On December 1, 1958, Mr. R. J. Burnside was appointed as Director of Operation and Maintenance for the Authority.

During the year the establishment and manning of the Iroquois Lock were completed and considerable progress achieved towards drawing up establishments required for the operation of the new locks at St. Lambert, Cote Ste. Catherine and Beauharnois.

Tolls

The Canadian Tolls Committee finalized its report on June 12, 1958. The recommendations which were submitted by the Canadian Tolls Committee and by the United States Tolls Committee were in complete agreement. On June 18, 1958, the report of the Canadian Tolls Committee was tabled in the House of Commons.

A Public Hearing was held in Ottawa on August 6, 1958, at which representations were heard by The St. Lawrence Seaway Authority from twenty-five companies and associations. Numerous briefs and resolutions were also filed with the Authority concerning the various recommendations of the Tolls Committee report.

The St. Lawrence Seaway Authority and the St. Lawrence Seaway Development Corporation held a number of meetings to discuss the representations and the briefs which were received and, on January 29, 1959, a Memorandum of Agreement with respect to tolls was signed by the two entities. In addition to the tariff of tolls agreed to, the Agreement covers the division of the tolls between the United States and Canada, the establishment of a joint tolls Advisory Board as well as the method of billing and collection of tolls.

On March 9, 1959, an agreement was concluded between the Government of Canada and the Government of the United States by an Exchange of Notes establishing a Tariff of Tolls to be charged on the St. Lawrence Seaway, in accordance with the following schedule:—



This photograph shows in the foreground the new modern high level south approach to the Honoré Mercier Bridge with divided highways and grade separation. In the background are the two new vertical lift bridges for the C.P.R. The canal at this point passes close to the Village of Caughnawaga, at the upper left, into Lake St. Louis.

Schedule

	<i>Montreal to or from Lake Ontario</i>	<i>Tolls Lake Ontario to or from Lake Erie (Welland Canal)</i>	<i>Complete Transit</i>
	\$	\$	\$
1. For transit of the Seaway, a composite toll, comprising—			
(1) a charge per gross registered ton, according to national registry of the vessel, applicable whether the vessel is wholly or partially laden, or is in ballast .....	.04	.02	.06
(2) a charge per ton of cargo, as certified on ships' manifest or other document, as follows:			
—bulk cargo .....	.40	.02	.42
—general cargo .....	.90	.05	.95
(3) a charge per passenger.....	3.50	4.00	7.50
(4) minimum charges, subject to the provisions of sub-items (1), (2) and (3) above:			
—pleasure craft	14.00	16.00	30.00
—other vessels	28.00	32.00	60.00
2. For partial transit of the Seaway:—			
(1) Between Montreal and Lake Ontario, in either direction, 15 per cent per lock of the applicable tolls;			
(2) Between Lake Ontario and Lake Erie, in either direction (Welland Canal), 50 per cent of the applicable toll; no toll to be assessed unless at least one lock is transited, or with respect to Lock 1 of the Third Canal at Port Dalhousie, Ontario.			
(3) Minimum charges:			
—pleasure craft, \$2.00 per vessel per lock transited;			
—other vessels, \$4.00 per vessel per each lock transited.			

FINANCE

Contracts awarded for construction work and for lock machinery and equipment, as at 31st December, 1958, totalled approximately \$254,435,000, against which there had been recorded expenditures amounting to \$226,819,500, leaving outstanding commitments of \$27,615,500.

Authority expenditures are financed by loans from the Government of Canada. During the corporation's fiscal year January 1-December 31, 1958, loans totalling \$106,000,000 were received, and the total of loans received and outstanding at 31st December, 1958, amounted to \$258,000,000. Interest rates charged by the Department of Finance on these loans have varied, being influenced by the cost of Government borrowings. Details of loans to the Authority are:—

April 1955	—	March 1956	\$21,500,000 at 3½%
June 1956	—	March 1957	56,000,000 at 3⅝%
May 1957	—	Nov. 1957	54,500,000 at 4⅛%
Nov. 1957	—	March 1958	40,000,000 at 4⅜%
April 1958	—	Sept. 1958	62,000,000 at 4⅛%
Oct. 1958	—	Dec. 1958	24,000,000 at 4½%

By arrangement, payment of interest on construction loans is deferred until the end of the first year of Seaway operation.



The Beauharnois Locks that will permit vessels to move between Lake St. Louis, in the foreground, and the Beauharnois Canal, in the background. To the left is the Beauharnois Powerhouse and to the right is the Town of Melocheville. The Lower Beauharnois Lock is in the centre of the picture, and, as can be seen, the highway passes by means of a tunnel beneath the upper end. There is a connecting channel between the Lower Lock and the Upper Lock. The New York Central Railroad passes by means of a swing bridge over the upper end of the Upper Beauharnois Lock.

When the Seaway is in operation, tolls will be charged to produce revenue to meet payment of operating and maintenance expenses, interest on borrowings, and amortization of capital, as required by the St. Lawrence Seaway Authority Act, 1951.

Included in this report is a comparative Balance Sheet of the Authority at 31st December, 1958, certified by the Auditor General of Canada; together with the following supporting schedules:—

- (a) Assets acquired or in course of construction
- * (b) Construction and Administrative Facilities
- (c) Administrative and Engineering Expenses (deferred—to be distributed on completion of construction)



A downstream view of the Iroquois Lock and of the Hydro control dam between Iroquois Point to the left and Point Rockaway on the United States Mainland.

**Report to the Minister of Transport
on the examination of
the Accounts and Financial Statements of
The St. Lawrence Seaway Authority
for the year ended December 31, 1958**

AUDITOR GENERAL'S OFFICE
OTTAWA

March 24, 1959.

Auditor General's Office
OTTAWA, March 24, 1959.

The Honourable GEORGE HEES,
Minister of Transport,
Ottawa.

Sir,

The accounts and financial statement of The St. Lawrence Seaway Authority have been examined for the year ended December 31, 1958. In compliance with the requirements of section 87 of the Financial Administration Act, I now report that, in my opinion:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statement of the Authority
 - (i) was prepared on a basis consistent with that of the preceding year and is in agreement with the books of account, and
 - (ii) gives a true and fair view of the state of the Authority's affairs as at the end of the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

Original signed by
WATSON SELLAR,
Auditor General.

(Established by the St. Lawrence Seaway Authority Act)

(with comparative figures as at December 31, 1957)

NOTE: Outstanding commitments under uncompleted construction contracts as at December 31, 1958, amounted to approximately \$28,000,000. In addition, claims for extra compensation made by certain contractors in respect of completed contracts have been received by the Authority.

Certified correct:

D. W. G. OLIVER.

Comptroller.

B. J. ROBERTS.

President.

Original signed by

WATSON SELLAR,

Auditor General of Canada

Certified in accordance with my report dated March 24, 1959 to the Minister of Transport, under section 87 of the Financial Administration Act.

THE ST. LAWRENCE SEAWAY AUTHORITY

Assets Acquired or in Course of Construction to December 31, 1958

	<i>Lachine (Laprairie) Section</i>	<i>Soulanges Section</i>	<i>Lake St. Francis Section</i>	<i>International Rapids Section</i>	<i>Thousand Islands Section</i>	<i>Welland Section</i>	<i>General</i>	<i>Total</i>
Engineering Surveys, etc.—								
Preliminary engineering surveys, investigations and design by the Department of Transport.....	\$ 163,475	—	\$ 1,745	\$ 446,353	—	—	\$ 195,551	\$ 807,124
Field charges, including surveys, hydraulic investigations, etc.	449,489	\$ 122,408	54,124	147,078	—	\$ 59,421	13,921	846,441
Professional services for special surveys and investigations.....	438,140	—	—	—	—	—	—	438,140
Hydraulic model building and models...	—	—	—	—	—	—	851,877	851,877
Land—Right of Way.....	5,723,926	611	—	635,369	—	—	—	6,359,906
Seaway Office Building, Cornwall.....	—	—	—	—	—	—	1,579,404	1,579,404
Bridges—Acquisition, new construction and alterations to existing structures.....	31,831,577	6,325,922	—	2,999,134	—	—	—	41,156,633
Channel Excavation and Construction of Dykes	50,150,442	43,236	6,383,774	21,610,358	\$ 598,292	21,023,850	—	99,809,952
Relocation of Roads, Water Intakes and Sewers	5,510,885	109,767	—	455,626	—	—	—	6,076,278
Canal Locks (including machinery and equipment valued at \$17,990,316).....	36,997,100	40,837,769	—	17,209,945	—	—	347,607	95,392,421
	131,265,034	47,439,713	6,439,643	43,503,863	598,292	21,083,271	2,988,360	253,318,176

NOTE: The amounts shown in the above Schedule include charges for depreciation on certain field buildings, shore and floating equipment to a total of \$180,839.

Schedule "B"

THE ST. LAWRENCE SEAWAY AUTHORITY

Field Buildings, Equipment, etc., as at December 31, 1958

	<i>Cost</i>	<i>Depreciation Absorbed</i>	<i>Book Value</i>
Field Buildings.....\$	199,204	\$ 161,549	\$ 37,655
Shore Equipment, including field motor vehicles.....	203,222	71,007	132,215
Floating Equipment.....	523,160	61,367	461,793
Automobiles	9,688	4,974	4,714
Office Furniture and Equipment..	368,600	118,616	249,984
	<u>1,303,874</u>	<u>417,513</u>	<u>886,361</u>

Schedule "C"

THE ST. LAWRENCE SEAWAY AUTHORITY

**Deferred Administrative and Engineering Expenses
as at December 31, 1958**

Salaries of Members and executive officers.....\$	436,666
Other salaries and wages.....	10,250,862
Contributions to Public Service Superannuation Account and Employees' Welfare Plan.....	552,172
Consultants' and analysts' fees.....	280,172
Printing, stationery and office supplies.....	553,501
Travel	462,598
Office accommodation—rentals and alterations.....	332,036
Depreciation on office furniture and equipment.....	118,616
Field buildings and automobiles—operation and maintenance (includ- ing depreciation, \$118,058).....	644,221
Plan reproduction.....	337,240
Information services.....	127,066
Miscellaneous	456,500
	<u>14,551,650</u>



THE ST. LAWRENCE SEAWAY AUTHORITY

Government
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ANNUAL REPORT

1959

Government
Publications

ANNUAL REPORT 1959



A Canadian coastal tanker leaves Upper Beauharnois Lock, downbound. At the lower end of the "pool" an ocean ship is about to leave the Lower Beauharnois Lock, upbound. A Canadian canaller lies at the tie-up wall.

CANADA

THE ST. LAWRENCE
SEAWAY AUTHORITY

Annual Report

for the Fiscal Year ended

DECEMBER 31,

1959

COVER PHOTO

The Royal Yacht, *Britannia*, with Her Majesty the Queen, President Dwight D. Eisenhower of the United States, Prime Minister John G. Diefenbaker and other official guests aboard, enters the ceremonial gateway downstream of St. Lambert Lock to open the St. Lawrence Seaway officially, June 26th, 1959.

PHOTO CREDITS: Cover, 89033, National Film Board. Frontispiece, 7569, page 2, Malak Studios. 88742, page 10, National Film Board. 7607, page 11, Malak Studios. 88863, page 16, National Film Board. 88859, page 17, National Film Board.

THE QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1960

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THE ST. LAWRENCE SEAWAY AUTHORITY

March 31, 1960.

The Honourable George Hees,
Minister of Transport,
Ottawa, Ontario.

Dear Sir:

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1959, to December 31, 1959, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

B. J. ROBERTS,
President.

EXECUTIVE OFFICERS OF THE ST. LAWRENCE SEAWAY AUTHORITY

AUTHORITY

B. J. ROBERTS, C.B.E., *President*
J.-C. LESSARD, *Vice-President*
*C. W. WEST, *Member*

OPERATION AND MAINTENANCE

R. J. BURNSIDE, *Director*
A. M. LUCE, *General Superintendent, Maintenance*
D. M. MACKENZIE, *General Superintendent, Operation*
R. L'HEUREUX, *Superintending Engineer—Eastern District*
E. J. ROSSI, *Superintending Engineer—Central District*
T. J. RYAN, *Superintending Engineer—Western District*

ENGINEERING

A. G. MURPHY, *Chief Engineer*
L. H. BURPEE, *Deputy Chief Engineer*

FINANCIAL

D. W. G. OLIVER, *Comptroller*
J. M. HENDERSON, *Assistant Comptroller*
L. E. BÉLAND, *Purchasing Agent*
W. M. SPRUNG, *Chief, Tolls and Statistics*

LAW

L.-A. COUTURE, *Counsel*
J. T. CARVELL, *Solicitor*

SECRETARY

of the Authority

P. E. R. MALCOLM, *Secretary and Director of Administration*
R. E. BÉLANGER, *Personnel Officer*
T. J. QUIGG, *Administration and Methods Officer*

* Retired on March 31, 1959.

THE ST. LAWRENCE SEAWAY AUTHORITY

Annual Report 1959

This report covers the first year of operation of The St. Lawrence Seaway Authority, which was constituted as a Corporation by Chapter 24, Statutes of Canada, 1951, now Chapter 242, R.S.C., 1952. By virtue of the Act of Incorporation, The St. Lawrence Seaway Authority undertook the provision of facilities between Montreal and Lake Erie to allow 27-foot navigation, concurrently with the construction of similar facilities in the International Rapids Section of the St. Lawrence River by the Saint Lawrence Seaway Development Corporation of the United States.

The major part of the construction was completed by April, 1959 and, as provided for by the legislation, the Welland Canal, as well as the Cornwall, Lachine and Sault Ste Marie canals, were transferred from the Department of Transport to The St. Lawrence Seaway Authority for operation and management by Order in Council, P.C. 1959-204, effective April 1, 1959.

The St. Lawrence Seaway was opened to commercial traffic on April 25, 1959, when the C.G.S. *d'Iberville* and *Montcalm* entered St. Lambert Lock with the official party of the Minister of Transport and representatives of the press, radio and television.

The St. Lawrence Seaway was officially opened on June 26, 1959, when Her Majesty Queen Elizabeth and President Eisenhower of the United States boarded the Royal Yacht *Britannia* with their guests and proceeded through St. Lambert and Côte Ste Catherine locks to a naval review on Lake St. Louis.

The event was a memorable one in the history of Canada and to commemorate the event, the remarks made by Her Majesty the Queen and the President are reproduced at the end of this report.

Traffic

The volume of traffic which made use of the new facilities provided by the St. Lawrence Seaway between Montreal and Lake Ontario reached a total of 20,590,000 tons, representing an increase of 75% or 8,830,000 tons, as compared with the traffic carried by the 14-foot canals during the year 1958. Traffic on the Welland Canal reached a total of 27,530,000 tons or an increase of 6,260,000 tons over the 1958 season of navigation. This represents an increase of 29%.

In February, 1960, The St. Lawrence Seaway Authority and the Saint Lawrence Seaway Development Corporation issued a statistical record of the traffic using the Seaway facilities during the navigation season of 1959. This report is obtainable from the Queen's Printer.

For statistical purposes, records were closed on January 14, 1960, which explains the slight variation between the figures quoted above and those shown in the traffic report. A summary of the final figures of the 1959 toll traffic appears below:

Montreal—Lake Ontario Section

	Upbound	Downbound	Total
No. of transits 1959	4,068	4,074	8,142
No. of transits 1958	5,647	5,598	11,245
Bulk Cargo—tons	9,560,000	9,040,000	18,600,000
General Cargo—tons	1,390,000	600,000	1,990,000
1959 Cargo—tons	10,950,000	9,640,000	20,590,000
1958 Cargo—tons	4,670,000	7,092,000	11,762,000

Welland Canal Section

	Upbound	Downbound	Total
No. of transits 1959	4,128	4,052	8,180
No. of transits 1958	4,405	4,331	8,736
Bulk Cargo—tons	8,400,000	17,250,000	25,650,000
General Cargo—tons	1,260,000	620,000	1,880,000
1959 Cargo—tons	9,660,000	17,870,000	27,530,000
1958 Cargo—tons	5,005,000	16,269,000	21,274,000

On the new section of the Seaway, there was shown a substantial increase in the overseas trade of Canada and the United States in 1959 compared with 1958. This increase amounted to 4,500,000 tons. As to particular commodity movement, grain registered an increase of 2,000,000 tons, iron ore upbound 4,600,000 tons, and fuel oil 575,000 tons. There was a decrease of 160,000 tons in pulpwood.

On the Welland Canal, an increase in tonnage was registered by iron ore, 2,600,000 tons, by grain 1,400,000 tons, coal 700,000 tons and by sand, gravel and stone 300,000 tons. Small decreases in tonnage were shown in pulpwood 180,000 tons, fuel oil 115,000 tons and gasoline 50,000 tons. Traffic in newsprint remained at about the same level.

Engineering

With the completion of most of the construction work, the engineering staff has been substantially reduced when compared with the peak years of the construction period. As of the year end, the personnel of this branch stood at 139 as against a maximum of 423 in 1957.

The field offices at St. Lambert, Côte Ste-Catherine and Iroquois were closed during 1959.

As already mentioned, the waterway was opened to through traffic from the Great Lakes to Montreal on April 25, 1959, but a temporary restriction of draught to 22'6" was imposed pending the completion of certain dredging. At that time, all the other major construction contracts,

totalling some 138, were virtually completed, as were some 42 contracts for the supply of lock and bridge components and machinery. Of the 16 dredging contracts awarded prior to 1959, 11 had been completed at the end of the year, while a new contract for some minor clean-up was planned for 1960. The restrictions of draught imposed at the spring opening of navigation was lifted before the official opening of the Seaway on June 26, at which time the full design depth was available. While the Seaway was fully operational, a certain amount of clean-up work was in progress, and dredging operations continued as the channels were widened to the design specifications. It is expected that the program of construction dredging will be completed in 1960.

The following dredging is outstanding:

	<i>cu. yds.</i>
Contract No. 35, Montreal Harbour Turning Basin	149,000
Contract No. 7, Lake St. Louis (clean-up) . . .	11,000
Contract No. 10, Lake St. Francis (clean-up) . . .	15,000
Contract No. 85, Cornwall Island North Channel .	159,138
Contract No. 86, Cornwall Island North Channel and South Channel (clean up)	699,521
Contract No. 232, Brockville Narrows (clean-up)	400
Total estimated dredging to complete contracts	1,034,059

Contracts were let in 1959 for the construction of a high level highway bridge to connect the City of Cornwall with Cornwall Island and the new high level bridge over the South Channel. This is to replace the present converted single track railway bridge. Of the 24 piers required, 8 have been completed and the remainder are under construction. The contract for the superstructure was awarded on October 23, 1959. The bridge is scheduled for completion by June 30, 1961.

Other work initiated during the year includes the letting of four contracts providing for the construction during the 1959-60 winter months of extensions to the existing approach walls on locks 1, 2 and 3 and the guard gate on the Welland Canal, the objective being to increase the traffic capacity of this link in the system. Construction is proceeding this winter and the work is scheduled for completion before the opening of navigation in the spring. For purposes of evaluation, designs and cost estimates are being prepared for a possible future duplication of the single locks on this canal.

Other scheduled construction work still incomplete includes installation of fendering on approach walls at Beauharnois, landscaping of the various lock areas and the design and construction of a gate lifter.

In addition to the foregoing, certain construction work initiated by the Department of Transport in connection with the older canals has been taken over by the Authority. Included is a new second bascule bridge over the Lachine Canal at Ville Saint-Pierre, Québec, which was opened to traffic on December 8, 1959, and certain improvements to conditions in the vicinity of the old Second Welland Canal at Thorold, Merriton and St. Catharines, Ontario.



Cote Ste. Catherine Lock, second from the Seaway entrance, overcomes the 30-foot fall of water through the Lachine Rapids, right.

A summary of progress over the past year showing total quantities of the major items of dredging, excavation, concrete and cement follows:

Summary of Progress Quantities

	Total to Dec. 31, 1958	Added 1959	Estimated for 1960	Estimated Final Totals
Dredging				
Common, cu. yds	12,871,597	2,483,224	995,722	16,350,543
Rock, cu. yds	1,270,083	116,518	38,337	1,424,938
Excavation				
Common, cu. yds.	27,531,581	72,369	275,900	27,879,850
Rock, cu. yds.	28,229,995	1,423	—	28,231,418
Concrete, cu. yds.	2,170,548	23,258	28,053	2,221,859
Cement, bags	12,590,045	139,548	150,318	12,879,911

Contractors' Claims

Claims filed by contractors engaged on Seaway construction have reached a total of \$43,900,000. This figure includes certain items which in the process of concluding contract payments are found to be adjustable within the terms of the contracts, as in the case of approved additional work or additional quantities where dispute as to quantity determinations has arisen. Claims which have been settled to date amount to \$3,643,000 and involved payments of \$2,895,000, the most of which related to unit price adjustments arising from reclassification of material excavated or dredged. The investigation of claims for a face amount of \$26,300,000 has been completed and offers of settlement involving about \$1,750,000 have been or are in course of being made. There remains a balance of claims totalling \$13,900,000 still under investigation.

St. Lawrence Seaway locks are manned and operate around the clock, seven days a week, during the seven-and-a-half month navigation season. This is Lower Beauharnois Lock, April 25th, opening day for navigation. Nearest ship is *Prins Willem George Frederik*, Netherlands flag, first ocean ship through the Seaway.



Operation and Maintenance

The function of operating and maintaining all canals in the system falls upon the newly-created Operation and Maintenance Branch, headed by the Director, with headquarters in the Authority's building at Cornwall, Ontario. Supporting staff there includes a General Superintendent of Operation and a General Superintendent of Maintenance, with engineering, technical, administrative and clerical personnel. There are three district organizations, each under the supervision of a Superintending Engineer: Eastern, comprising the South Shore and Lachine canals; Central, comprising the Beauharnois, Iroquois and Cornwall canals; and Western, comprising the Welland and Sault Ste-Marie canals.

The district staffs consist of approximately 275 maintenance personnel including electricians, transmission linemen, machinists, mechanics, welders, blacksmiths, carpenters and riggers, together with approximately 725 operating personnel, who operate the locks, bridges and other structures. At each lock, for instance, a lockmaster, two lockmotormen and four linesmen are required on each of three shifts. The navigation season on the St. Lawrence River canals normally extends from the middle of April to the end of November and on the Welland canal from the 1st of April to the middle of December. During this period, all Seaway structures are operated 24 hours a day, seven days a week.

Navigation

Because of the severe ice conditions, the worst encountered in many years, the scheduled opening of the Seaway from Montreal to Lake Ontario was delayed from April 20th to April 25th. A large number of vessels waiting to transit had accumulated at Montreal harbour and thus the capacity of the locks was strained to the utmost during the first period of the navigation season. Although the Welland canal was put into operation on April 6th, even here, due to a heavy accumulation of ice in Port Colborne harbour and along the shores of Lake Erie, only three vessels were able to make passage through the canal before April 17th. Traffic began through the Canadian Sault Canal on April 13th.

Other problems encountered during the preparatory period prior to the opening included placing of aids to navigation by the Department of Transport on the new open water sections of the Seaway extending some 110 miles from Montreal to Iroquois, Ontario, a task also hampered by the late spring break-up, and the training of vessel traffic controllers, lockmasters, lockmotormen and other operating personnel whose experience had been limited to the shallow-draft Quebec and Ontario-St. Lawrence canals.

Due to the great influx of ocean vessels from practically all parts of the world, difficulty was sometimes experienced in obtaining a sufficient number of qualified pilots to ensure a smooth flow of traffic and, of course,

the language barrier at times hampered communications. It was also found that many of the ocean vessels preferred to lie at anchor during the hours of darkness and this practice resulted in some disruption to traffic, since the locks, which had been idle during part of the night, were unable, the following morning, to handle these vessels in addition to those which had continued passage during the night and were then ready to enter the locks.

Some troubles were encountered due to inexperience on the part of those in charge of deep sea vessels in transiting inland waters and canals. However, the ships' officers proved most co-operative, and, by the end of the season, were beginning to adjust to the unfamiliar navigating conditions.

At the Welland canal, serious delays were periodically occasioned to vessels when they were required to wait at anchor at either Lake Ontario or Lake Erie for passage through the canal. During such periods it sometimes became necessary to grant priority to certain bulk carriers in order to expedite the passage of such essential shipping. Also on the Welland canal it was found that the fender booms while in the raised position were particularly vulnerable to, and were, in fact, often struck by ocean vessels with their wide flaring bows. Some 85 hours of navigation delays resulted from accidents involving these fender booms. However, it is felt that with the machinery modification now being carried out and described elsewhere in this report, this problem will no longer exist in 1960.

The St. Lawrence River canals were officially closed to navigation on November 30th; the Canadian Sault on December 12th, and the Welland canal on December 15th. In spite of the various problems, many of which might well have been expected during the first year of operation on a project of this magnitude, it is felt that the Seaway's first year was satisfactory.

Accidents and Delays

During the course of the year, delays to navigation were occasioned by a variety of causes, among them high winds and fog, minor equipment failures and vessel accidents. Such minor electrical and mechanical troubles as blown fuses, limit switches requiring adjustments and broken shear pins in operating machinery could, however, have serious consequences. As an example, there is the case of a minor electrical failure which prevented the Valleyfield lift bridge from being raised as a downbound vessel was approaching for passage. On attempting to come to an emergent stop the vessel swung crosswise in the channel and came to rest against the bridge abutment, narrowly avoiding serious damage to the lift span, with a resultant major traffic delay. A more lengthy delay occurred on the Welland canal at Lock 4, due to the failure of the anchor bolts on one of the mitre sill timbers with a resultant splitting of the timber, which necessitated the unwatering of the lock and replacement of the sill timber. A number of traffic delays were also caused by vessels striking fender booms, piers, entrance walls and other canal structures. It may be pointed out that a breakdown of the statistics on vessel accidents on the

Welland canal reveals that only four inland vessels per 1000 passages were involved in such accidents, as compared with 34 ocean vessels per 1000 passages. The record on the Welland canal further indicates that there were 110 vessels involved in accidents during the navigation season which resulted in approximately 128 hours of delays to navigation. Also there were 80 equipment failures which resulted in approximately 233 hours of delays.

Shops and Equipment

At each of its district headquarters the Authority maintains machine shops, electrical shops, carpentry shops, vehicle repair garages, welding and blacksmith shops, fully equipped to handle the majority of its own maintenance and repair work including the fabrication of new parts as required.

In addition, the Authority operates and maintains a fleet of tugs, work-boats, gatelifters, derrick scows, deck scows, sweep scows and other small craft, as well as a line of land based construction equipment including cranes, shovels, bulldozers, tractors, front end loaders, compressors, pumps, welding machines, vehicles and other construction tools and equipment.

Improvements

During the course of the year a number of improvement projects were carried out and plans and specifications prepared for the winter improvement works program. These included such items as the construction of a new bascule bridge over the Lachine canal at Ville Saint-Pierre; continuation of the Second Welland canal cleanup project; planting of 5000 trees along the Welland canal to act as a windbreak; the completion, except for paving, of a new causeway at Cardinal, Ontario; installation of new automatic fire protection systems in the standby diesel rooms on the new locks; erection of temporary shop facilities at the new locks; modification of mooring bollards on the Welland canal; provision of 600 feet of emergency tie-up space on the South Shore canal.

At the close of navigation, work was started immediately on the modification of 13 wire rope fenders on the Welland canal. This modification will permit the fenders to be raised to a near vertical position, thus minimizing the possibility of being struck by vessels with flared superstructures. As a result of the failure of one lock sill timber at Lock 4 on the Welland canal, plans were made for a program to replace the timber sills with steel and concrete and to this end a contract was let for the installation of ten such sills. Plans were also made for improvements to the remaining timber sills and this work was begun by Authority forces.

Maintenance

A complete program of preventive and corrective maintenance on all equipment, structures and machinery, including regular lubrication of all

machinery parts and wire ropes for bridges, valves and fenders, was carried out on all canals. This being the first year of operation of the new locks, the maintenance work load was abnormally high due to the necessity for minor adjustments during the initial machinery break-in period.

During the course of the navigation season many fender booms on the Welland canal were replaced after being damaged while in the open position, and two booms were replaced at St. Lambert lock after being struck while in the closed position. Also at the Welland canal a number of gate ropes were replaced due to age or wear, although actual delays to navigation were caused by only three gate rope failures. Rip-rap was placed at various locations on the South Shore and Welland canals to prevent bank erosion.

Plans were formulated for a major winter maintenance works program and unwatering of the locks was carried out immediately after the close of navigation to facilitate the work.

Some of the major items planned for the Welland canal included replacement of the counterweight ropes on 3 vertical lift bridges; replacement of 6 fender ropes; replacement of half the total number of gate ropes; repaving the deck of bridge 18 and complete replacement of 6 timber mitre sills; diversion of transmission lines in the vicinity of the new tie-up walls and relocation of the sub-station at bridge 4 to permit construction of the new high level crossing of the canal by the Queen Elizabeth Way, near Homer, Ontario.

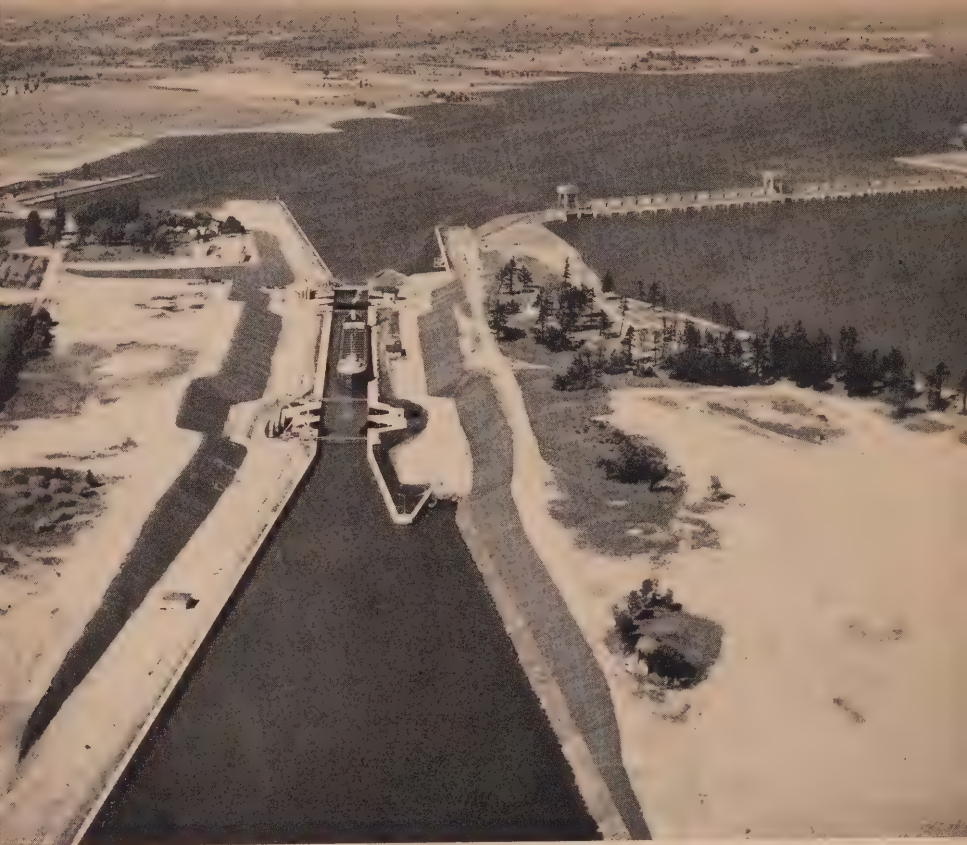
At the Sault Ste-Marie canal the program of refacing the masonry lock walls with concrete was continued and work was started on replacement of a mitre sill.

On the new canal system a few of the major maintenance items included retensioning, under contract, of the counterweight cables on six vertical lift bridges; modification of the airtight bulkheads; installation of power lines for "Limit of Approach" signs at Beauharnois and erection of lighting standards for the north tie-up wall at Upper Beauharnois lock.

In conjunction with the visit of Her Majesty, The Queen, for the official opening ceremonies, considerable preparation was carried out by the maintenance forces. Floating docks were positioned, platforms, flagpoles, signs, etc., were erected, special timber fendering for the protection of the royal yacht was placed, and some landscaping completed. Many months of advance planning were required to facilitate the passage of the royal yacht and the attendant navy escort and to minimize delays to an extremely heavy concentration of commercial shipping which was taxing the capacity of the system at that time.

Hydraulics

The flow of water through the canals is regulated by means of a network of dams and weirs to prevent flooding, maintain proper navigation levels and provide sufficient quantities for power generation, municipal water supplies and other leased water rights.



A Canadian laker moves upbound through Iroquois Lock. To right is Iroquois Control Dam at western end of Lake St. Lawrence.

The usual governing depth of the Lachine Canal is 14 feet 3 inches. Due to low water levels on the lakes during the 1959 season, however, it became necessary to reduce, from time to time, the published available depth for vessels transiting this canal. The minimum depth during the season was 13 feet 6 inches.

Finance

Capital Instruction

Contracts awarded for construction work and for lock machinery and equipment, as at December 31, 1959, totalled approximately \$274,852,500, against which there had been recorded expenditures amounting to \$255,124,500. After allowing for lapsed balances on completed contracts, outstanding commitments total approximately \$18,000,000.

Total capital expenditures to December 31, 1959, were \$310,650,000, made up as follows:

Construction and supply contracts	\$255,124,500
Land expropriations	6,700,000
Sundry (including field labour; cost of relocations of tracks, signals and communications; and payments to power entities for dredging in the International section	14,215,500
Equipment (shore, floating, shop, etc.)	1,510,000
Administration and Engineering expenses . .	16,700,000
Interest during construction	16,400,000
	<hr/>
	\$310,650,000

Capital expenditures are financed by loans from the Government of Canada. The amount borrowed during 1959 was \$27,500,000, bringing the

One of the larger lakers, 636 feet long, sails from Lake Ontario toward Iroquois Lock. Main purpose of the Seaway was to allow these hitherto lake-bound giants to reach Montreal and lower river ports. A number can carry over 20,000 tons of cargo, each.



total of loans outstanding at December 31, 1959, to \$285,500,000. This amount, representing actual cash requirements, is considerably less than the indicated total charges to capital account of \$310,650,000, due to such outstanding items as interest during construction, holdbacks on contracts and other charges in process of payment, as well as to the employment temporarily of current cash from operations to finance capital expenditures. Interest rates charged by the Department of Finance have varied, being influenced by the cost of Government borrowings. Details of loans to the Authority are:

April 1955 to March 1956	\$21,500,000	at 3¼%
June 1956 to March 1957	56,000,000	at 3⅝%
May 1957 to November 1957	54,500,000	at 4⅛%
Nov. 1957 to March 1958	40,000,000	at 4⅜%
April 1958 to September 1958	62,000,000	at 4⅛%
Oct. 1958 to March 1959	36,000,000	at 4½%
April 1959 to September 1959	14,000,000	at 5 %
December 1959	1,500,000	at 5¾%

By arrangement, payment of interest on construction loans is deferred until the end of the first year of Seaway operation.

Tolls

The St. Lawrence Seaway Authority Act requires that there be established a tariff of tolls under which there would be recovered the expenditures by Canada for Seaway operation and maintenance, interest and amortization of capital within a 50-year period. United States legislation, which authorized construction of Seaway locks on the United States side of the International Rapids section, carries similar authorization to cover their expenditures.

The Tolls Committees of Canada and of the United States recommended a tariff of tolls which, based on an estimate of the respective (Canadian and United States) cost of operation and maintenance, interest and amortization of capital expenditures within the 50-year period, would meet the requirements of the legislation. The Tolls Committees recommended that the toll revenue earned in the St. Lawrence section, i.e., between Montreal and Lake Ontario, be divided in the proportion of the respective annual charges of the two entities, (The St. Lawrence Seaway Authority and the Saint Lawrence Seaway Development Corporation). These proportions were tentatively established at 71% to The St. Lawrence Seaway Authority and 29% to the Saint Lawrence Seaway Development Corporation.

By agreement between Canada and the United States dated March 9, 1959, the tariff was approved and the basis of distribution determined. It was also agreed that the Authority would be assigned the responsibility for the billing and collecting of tolls, accounting to the Saint Lawrence Seaway Development Corporation for the United States portion of the revenue.

The tolls derived from the Welland canal accrue exclusively to Canada. Totals of tolls assessed for the 1959 season of navigation are as follows:

<i>St. Lawrence Section</i> (Montreal to Lake Ontario)		
Canada	\$7,105,279	
United States . . .	2,949,187	\$10,054,466
<i>Welland Canal</i>		1,224,062

It may be noticed that the traffic report of the St. Lawrence Seaway for 1959 (previously referred to) showed total toll revenue for the St. Lawrence section (Montreal to Lake Ontario) of \$9,889,696 and for Welland canal, \$1,206,163. The respective differences between the figures in the statistical report and the totals shown above as actual recorded revenues are due to the fact that the traffic report was prepared for publication about January 15, 1960, since which date there was brought into the 1959 accounts by accrual the remaining tolls revenue of 1959 respecting which steamship companies' reports had not been furnished by the time the traffic report was compiled.

Income and Expenses

As the Montreal-Lake Ontario section of the Seaway went into operation on April 25th, the income and expense statement records transactions from that date, organization expense having been capitalized. Welland canal revenue and expense are recorded from April 1, the date of transfer.

Authority income amounted to \$9,214,475, comprising toll revenue of \$7,105,279 assessed for transits through the new Seaway locks between Montreal and Lake Ontario, and \$1,224,062 on transits through the Welland canal; plus sundry revenues (rentals, wharfage, bridge revenue, etc.) amounting to \$885,134.

Operating and maintenance expenses amounted to \$2,917,501, and administrative expenses were \$1,134,955, making a total of \$4,052,456. Of this expenditure \$99,236 was recovered from non-toll canals, resulting in a net administration and operating cost of \$3,953,220. Net operating income available for debt service was, therefore, \$5,261,255. The applicable interest charge was \$7,994,496, which exceeded the net operating income by \$2,733,241. After recording a charge of \$3,955,065 for depreciation, a net loss of \$6,688,306 for the period is shown.

At the end of March, 1960, an interest payment of \$5,000,000 was made to the Government

In view of the provisions of the international agreement relative to the distribution of tolls on the Montreal to Lake Ontario section of the Seaway and the fact that the operation of the Welland canal relates to Canada only, the Authority, in its internal accounting, records the respective revenues and expenses of these sections separately and makes the appropriate distribution of overhead administrative costs. For the period under review, the

Montreal to Lake Ontario section was \$1,456,796 short of meeting the full amount of interest on debt, while the Welland canal showed a deficiency of \$1,276,445, as set out in the following statement:

	St. Lawrence River (Montreal to Lake Ontario)	Welland Canal	Total
Income:			
Tolls assessed	\$7,105,279	\$1,224,062	\$8,329,341
Miscellaneous	254,778	630,355	885,134
	<u>\$7,360,057</u>	<u>\$1,854,417</u>	<u>\$9,214,475</u>
Expense:			
Operating, maintenance and proportion of administrative expense	\$1,465,914	\$2,487,306	\$3,953,220
Net operating income (Or deficit) available for debt service	\$5,894,143	\$-632,888	\$5,261,255
Interest	\$7,350,939	\$ 643,557	\$7,994,496
Amount by which interest was not earned	<u>\$1,456,796</u>	<u>\$1,276,445</u>	<u>\$2,733,241</u>

Source and Application of Revenue

The following statement indicates the source and application of Seaway revenue (Canadian portion):

Source	Dollars	%
Seaway tolls	\$8,329,341	90.39
Bridge revenue	206,810	2.24
Miscellaneous sources	678,324	7.37
	<u>\$9,214,475</u>	<u>100</u>
Application		
Salaries and employee benefits	2,780,185	30.17
Supplies, services and other costs	1,173,035	12.73
Interest on debt (paid March 1960)	5,000,000	54.26
Addition to working capital	261,255	2.84
	<u>\$9,214,475</u>	<u>100</u>

Assets Transferred

The cost of the facilities transferred to the Authority by P.C. 1959-204, viz., the Welland, Lachine, Cornwall and Sault Ste-Marie canals, is recorded in the Authority's balance sheet at the amounts shown in the Public Accounts of Canada with an appropriate liability entry in the name of the Government.

At the foot of the income and expense statement will be found a record of operating and maintenance and capital expenses of the non-toll canals for the period April 1 to December 31, 1959. These disbursements, less income earned on the non-toll canals, are recovered by the Authority from Parliamentary appropriations.

Financial Statements

Appended to this report is a copy of the Auditor General's report for the year ended December 31, 1959, together with the balance sheet and the statement of income and expense mentioned therein. There is also included a statement of assets acquired or in course of construction to December 31, 1959.

Personnel

With the transfer to the Authority on April 1 of the management of Welland, Lachine, Cornwall and Sault Ste-Marie canals, the former operating and maintenance staffs of these facilities became personnel of the Authority to the extent required.

At the end of 1959, the regular staff of the Authority numbered 1299, as shown in the following table:

Head Office (Ottawa)	20		
Headquarters (Cornwall)	125		
Montreal Office (Construction)			
Capital engineering	50		
Administration	15		
Field (transferred)	12		
	<u>77</u>		
		222	
Field Offices (Construction)			
Dredging (Lachine)	8		
Beauharnois division	11		
Dredging (International Rapids and Thousand Is.)	28		
Welland canal division	30		
	<u>77</u>		
		77	
Operation and Maintenance			
Eastern district: Headquarters	25		
Lachine canal	110		
South Shore canal	80		
Central district: Headquarters	25		
Beauharnois canal	80		
Cornwall canal	80		
Iroquois canal	45		
Western district: Headquarters	35		
Welland canal	465		
Sault Ste-Marie canal	55		
	<u>1,000</u>		
		1,000	
TOTAL		<u>1,299</u>	

On July 8, the Canada Labour Relations Board certified the Canadian Brotherhood of Railway, Transport and General Workers as bargaining agent for some 900 employees engaged in operation and maintenance of the Authority's facilities, and on December 9, the same brotherhood applied

for certification as bargaining agent for the Cornwall headquarters office staff, numbering some 90 employees. This latter application was approved on January 11, 1960. As of the date of this report, two agreements have been signed with the brotherhood, both agreements expiring December 31, 1960.

Mr. C. W. West, who had been a Member of The St. Lawrence Seaway Authority since its inception, July 1, 1954, retired on March 31, 1959.

It is with pleasure that the Members of the Authority tender their appreciation for the loyal and effective service rendered by the officers and employees throughout the organization.

Ottawa, March 29, 1960.

The Honourable GEORGE HEES,
Minister of Transport,
Ottawa.

Sir,

The accounts and financial statements of The St. Lawrence Seaway Authority have been examined for the year ended December 31, 1959. In compliance with the requirements of section 87 of the Financial Administration Act, I now report that, in my opinion:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statements of the Authority
 - (i) were prepared on a basis consistent with that of the preceding year and are in agreement with the books of account, and
 - (ii) in the case of the balance sheet, give a true and fair view of the state of the Authority's affairs as at the end of the financial year, and
 - (iii) in the case of the statement of income and expense, give a true and fair view of the income and expense of the Authority for the period from April 25, 1959, commencement of operations, to December 31, 1959; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

A. M. HENDERSON,
Auditor General.

THE ST. LAWRENCE SEAWAY AUTHORITY (Established by the St. Lawrence Seaway Authority Act)

Balance Sheet as at December 31, 1959

ASSETS		LIABILITIES	
Cash	469,782	Accounts Payable	\$ 3,255,496
Accounts Receivable (less provision of \$50,000 for doubtful accounts)	882,811	Due to Saint Lawrence Seaway Development Corporation re tolls	134,570
Due from Government of Canada re Non-Toll Canals	954,753	Contractors' Holdbacks	2,961,392
Bonds and Cash held as Contractors' Security and other Deposits	3,073,983	Contractors' Security and other Deposits	3,073,983
Investment in shares of Cornwall International Bridge Company Limited	200,000	Proprietary Equity of the Government of Canada:	
Inventories of Materials, Small Tools and Minor Equipment—at cost	912,111	Capital Assets transferred from Department of Transport as at April 1, 1959	\$179,352,965
Capital Assets, at cost		Loans under section 25 of the Act	283,360,000
Deep Waterway System (including Welland Ship Canal transferred from Department of Transport at a value of \$130,716,890)	\$ 9,149,497	Interest on loans—matured and capitalized	24,427,116
Buildings	6,969,831		489,280,081
Municipal remedial works	7,410,641	Deduct: Deficit—net loss for the period April 25, 1959, commencement of operations, to December 31, 1959, per Statement of Income and Expense	6,688,306
Channels, canals and locks	291,950,204		482,591,775
Bridges, including alterations to existing structures	47,258,662		
Floating, shore, ship and other equipment	3,352,849		
Works under construction	75,274,805		
	441,366,489		
Less: Accumulated provisions for depreciation (excluding Welland Ship Canal)	4,473,684		
	436,892,805		
Non-Toll canals and other properties, at Lachine, Cornwall, Sault Ste. Marie and Niagara Peninsula, transferred from Department of Transport, at values recorded in the accounts of the Government of Canada	48,630,991		
	485,523,796		
	492,017,216		

Note: Outstanding commitments under uncompleted contracts as at December 31, 1959, amounted to approximately \$18,000,000. In addition, claims for extra compensation made by certain contractors in respect of certain contracts have been received by the Authority.

Certified correct:

Approved:

D. W. C. OLIVER
Comptroller

B. J. ROBERTS
President

Certified in accordance with my report dated March 29, 1960 to the Minister of Transport, under section 87 of the Financial Administration Act.

A. M. HENDERSON
Auditor General of Canada

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Income and Expense for the period

April 25, 1959, commencement of operations, to December 31, 1959

DEEP WATERWAY SYSTEM

Income:

Tolls assessed	\$8,329,341	
Miscellaneous	885,134	
		\$9,214,475

Expense:

Operating and maintenance expenses:

District superintendence	\$ 383,107	
Channels, canals and locks	1,758,475	
Bridges	489,615	
Grants in lieu of municipal taxes	112,616	
Miscellaneous	173,688	
		2,917,501

Administrative expenses:

Salaries of members and executive officers	64,833	
Other salaries	441,912	
Employees' welfare benefits	345,972	
Travel and removal	42,474	
Communications	45,783	
Printing, stationery and office supplies	64,656	
Provision for doubtful accounts	50,000	
Miscellaneous	79,325	
		1,134,955

	4,052,456	
Deduct: Portion applicable to non-toll canals	99,236	
		3,953,220

Net operating income before providing for interest and depreciation	5,261,255
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Interest on loans from the Government of Canada	7,994,496
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Provisions for depreciation	3,955,065	
		11,949,561

Net loss for the period	6,688,306
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NON-TOLL CANALS AND OTHER PROPERTIES (from April 1, 1959)

Expense:

Operating and maintenance expenses	830,232	
Construction of works and acquisition of equipment	1,138,656	
		1,968,888

Income:

Rentals, wharfage and other income	313,405	
--	---------	--

Operating deficit and capital expenditures recovered or recoverable from parliamentary appropriations	1,655,483
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THE ST. LAWRENCE SEAWAY AUTHORITY

Assets acquired or in course of construction to December 31, 1959

	Lachine (Laprairie) Section	Soulages Section	Lake St. Francis Section	International Rapids Section	Thousand Islands Section	Welland Section	General	Total
	\$	\$	\$	\$	\$	\$	\$	\$
Land- Right of Way	6,356,227	7,365	—	726,911	—	1,950,000	108,994	9,149,497
Buildings—(Seaway office building, Cornwall, Ville La Salle models building and lock operating buildings	591,287	141,971	—	176,083	—	3,533,305	2,527,185	6,969,831
Municipal Remedial Works—(Relocation of roads, water intakes and sewers)	6,814,306	113,966	—	482,369	—	—	—	7,410,641
Channels, canals and locks	71,935,953	47,575,000	504,427	31,236,843	—	139,673,355	1,024,626	291,950,204
Bridges— Acquisition, new construction and alterations to existing structures	34,719,037	865,210	—	3,315,521	—	8,345,300	13,594	47,258,662
Floating, shore, shop and other equipment	—	—	—	—	—	2,044,306	1,308,543	3,352,849
Work under construction	34,901,195	9,734,005	7,075,871	21,636,649	1,038,153	849,684	39,248	75,274,805
	155,318,005	58,437,517	7,580,298	57,574,376	1,038,153	156,395,950	5,022,190	441,366,489

*The total for the Welland section is made up of expenditures by the Authority amounting to \$25,719,863 (dredging, \$24,870,179 and work under construction, \$849,684) and the cost of the Welland canal transferred from Department of Transport, as per Public Accounts, \$130,716,890, less value of minor equipment (\$40,803) transferred to inventories of materials, etc.

Address by Her Majesty The Queen

Mr. President,

I am delighted that this occasion which marks the inauguration of a great joint enterprise between our two countries should afford me the first opportunity of welcoming you and Mrs. Eisenhower to Canada. It is with the warmest feelings of friendship that I do so on behalf of the Canadian people, myself and my husband.

The President of the United States will always be welcome here, but today there is an added pleasure and a special warmth in our greeting.

You will always be remembered as one of the great military leaders who brought the free world through the most severe crisis of modern times. The soldiers, sailors and airmen of the Commonwealth, including many thousands of Canadians, were proud to serve under your leadership until the ultimate victory was won.

We welcome you here as President of a great and friendly neighbouring State; but we have a special welcome for you as General Eisenhower.

Today, Canada and the United States are celebrating a victory of another kind. This distinguished company has come together from the two great countries that border this waterway to mark the completion of a combined operation that ranks as one of the outstanding engineering accomplishments of modern times. We can say in truth that this occasion deserves a place in history.

This is nothing new to the Saint Lawrence River which, from the times of Cartier and La Salle, of Wolfe and Montcalm, has been the scene of so much of North America's history.

Depuis le jour où les intrépides explorateurs et colons français ont établi les bases du Canada sur les rives de ce fleuve, des hommes prévoyants ont rêvé d'une voie navigable en eau profonde depuis le port à marée de Montréal jusqu'à la tête des Grands Lacs. Plusieurs générations de Canadiens, tant de langue française que de langue anglaise, ont travaillé à la réalisation de ce projet grandiose. Même au dix-septième siècle, il y eut déjà des projets visant à contourner les rapides de la Chine. Ces rapides doivent, incidemment, leur nom à la croyance générale de l'époque qu'ils bloquaient la route vers la Chine. Dollier de Casson, dès mille six cent quatre vingt, avait déjà envisagé la possibilité de surmonter cet obstacle. Sa tentative hardie était cependant vouée à l'échec, car il était bien en avant de son siècle. Il demeure cependant le pionnier de la canalisation du Saint-Laurent et nous nous devons aujourd'hui de lui témoigner notre reconnaissance.

Since the time of Dollier de Casson, men have dreamed and worked for two and a half centuries to make this river navigable, and now at last it is a reality. This waterway will carry ocean shipping from tidewater to the very heart of the continent, a distance of more than two thousand miles. It will affect the lives of many generations of our peoples; and it is bound to exercise a profound influence on the maritime trading nations of the world.

It is right we should acknowledge the foresight of those who first conceived this great plan. But we should also acknowledge the courage and persistence of those men in public life, in both countries, who brought about the political agreement essential to putting the project in hand. When their work was done, it rested on the engineers to design these vast and complex works, which finally began to take shape in the hands of the men who drove the trucks, poured the concrete and performed all the other tasks to complete the Seaway. To each and every one of them I offer my congratulations and the congratulations of their fellow citizens.

Just ninety-nine years ago my great-grandfather, King Edward VII, then Prince of Wales, came to open the Victoria Bridge. In those days that bridge was regarded as a tremendous feat of engineering. It was obviously a good bridge because nearly one hundred years later it is still in use. In fact I shall sail under it shortly. It was also the final link in a new railway line more than two thousand miles long. So in 1860 people thought of the Victoria Bridge as a striking symbol of Canadian progress and achievement.

Today, within sight of the spot where the Prince of Wales stood in 1860, we are opening a project with exactly the same significance for our own age. In the context of a much larger and stronger Canada, this enterprise reflects the same confidence and determination. The same creative vision has conceived and built a highway which will open the middle of this continent to the commerce of the world.

Je vois dans l'achèvement des travaux de la canalisation du Saint-Laurent, une signification qui dépasse les avantages économiques qui en découleront. Cette réalisation ouvre, en premier lieu, un nouveau chapitre de l'histoire de la confédération en établissant de nouveaux liens entre les deux principaux groupes ethniques dont la présence donne à la nation canadienne un caractère particulier. Le succès de cette entreprise démontre en outre, qu'il est possible pour deux Etats voisins de co-opérer dans un esprit de confiance mutuelle à l'édification d'une œuvre commune.

This vast undertaking has been a co-operative effort of Canada and the United States, of the Power Authority of the State of New York and the Hydro-Electric Power Commission of the Province of Ontario. The two nations built it together and the two nations will share its benefits. Power will flow from the new turbines to drive factories on both sides of the river. Ocean-going ships will go up and down this waterway, taking goods to and

from American and Canadian ports, and exchanging the products of North America for those from the rest of the world.

More than all this, it is a magnificent monument to the enduring friendship of our two nations and to their partnership in the development of North America. That partnership is most agreeably symbolized, Mr. President, in the fact that you and I have joined together to perform this ceremony today.

Address by President Dwight D. Eisenhower

Citizens of Canada and the United States,

It is a great personal privilege to be a part of the ceremony of the official opening of the St. Lawrence Seaway. The occasion gives to me the opportunity to express again to Your Majesty the lasting respect, admiration and affection of the citizens of the United States for you, and for all the people of Canada over whom you reign as their gracious Queen. Moreover, I prize this renewal of my friendly contacts with your eminent Prime Minister who was so warmly hospitable when I visited Ottawa last year.

Because we are in this beautiful part of Canada where French is principally spoken, will you permit me a single halting sentence of my western prairie brand of that language:

Je suis très heureux de me retrouver parmi vous au Canada où, il y a un an, j'ai fait un si agréable séjour.

This waterway, linking the oceans of the world with the Great Lakes of the American continent, is the culmination of the dreams of thousands of individuals on both sides of our common Canadian-United States border. It is the latest event in a long history of peaceful parallel progress by our two peoples.

Side by side we have grown up together. Long ago we found solutions for many of the problems characteristic of pioneering peoples. We have built nations out of vast stretches of virgin territory and transformed a wilderness into one of the most productive areas on earth. We are still developing better means of production and communication and supporting measures needed for the welfare of our respective peoples.

A notable spirit of cooperation has been responsible for major steps in our past progress. That spirit animates both of us today. We enjoy between us a larger volume of reciprocal trade than do any other two countries in the world. Our people move freely back and forth across a boundary that has known neither gun nor fortress in over a century. Our citizen-soldiers have three times fought together in the cause of freedom and today we are as one in our determination to defend our homelands. We have lived in peace with each other for nearly a century and a half. We cherish this record.

There have been and are still problems to solve between us. But in the past, as now, we have never faltered in our conviction that these must be settled by patient and understanding negotiation, never by violence.

So today, our two nations celebrate another triumph of peaceful living. The St. Lawrence Seaway presents to the world a 2300-mile waterway of locks, lakes, and man-made channels. Its completion is a tribute to those far-sighted and persevering people who across the years pushed forward to their goal despite decades of disappointments and setbacks. We pause to salute those who have shared in this task, from the architects and the planners to the artisans and the workers who have spent countless hours in its construction. Two of the leaders who helped create the sentiment for this great development were Prime Minister Bennett of Canada and former President Herbert Hoover.

The parade of ships already passing through the Seaway on their way to and from the heart of the continent, strikingly demonstrates the economic value of this new channel. But the Seaway is far more than a technical and commercial triumph. It has more significance than could the successful construction of even this notable aid to commerce and navigation. It is, above all, a magnificent symbol to the entire world of the achievements possible to democratic nations peacefully working together for the common good.

May this example be never forgotten by us, may it never be ignored by others. For in the reasonable resolution of the acute international problems of our time rests the single hope for world prosperity and happiness in peace, with justice for all.

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ANNUAL REPORT 1960

CANADA

THE ST. LAWRENCE
SEAWAY AUTHORITY

Annual Report

for the Fiscal Year ended

DECEMBER 31,

1960

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THE ST. LAWRENCE SEAWAY AUTHORITY

March 30, 1961.

THE HONOURABLE LEON BALZER,
Minister of Transport,
Ottawa, Ontario.

DEAR SIR:

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1960, to December 31, 1960, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

R. J. RANKIN,
President.

THE ST. LAWRENCE SEAWAY AUTHORITY

R. J. RANKIN, *President*

P. CAMU, *Vice-President*

EXECUTIVE OFFICERS

R. J. BURNSIDE.....	<i>Director of Operation and Maintenance</i>
L. A. COUTURE.....	<i>General Counsel</i>
P. E. R. MALCOLM.....	<i>Secretary and Director of Administration</i>
A. G. MURPHY.....	<i>Chief Engineer</i>
D. W. G. OLIVER.....	<i>Comptroller</i>

NOTE: Mr. R. J. Rankin succeeded Mr. B. J. Roberts as President, August 1, 1960.
Dr. P. Camu succeeded Mr. J. C. Lessard as Vice-President, October 15, 1960.

THE ST. LAWRENCE SEAWAY AUTHORITY

Annual Report 1960

This is the seventh report published by The St. Lawrence Seaway Authority. Established as a Corporation by Chapter 24, S.C., 1951, now Chapter 242, R.S.C., 1952, the Authority now reports on its second year of operation of the 27-foot navigational facilities that were constructed in the years 1954 to 1959 between Montreal and Lake Erie.

The St. Lawrence Seaway opened officially on June 26, 1959, and construction was virtually completed by the end of that year. Thus, the 1960 report is the first one to deal with twelve months of operation and administration of the Seaway system and of the other canals transferred from the Department of Transport to the Authority by Order-in-Council, P.C. 1959-204.

Traffic

A detailed Traffic Report of the St. Lawrence Seaway for 1960 has been prepared by the Saint Lawrence Seaway Development Corporation of the United States and the Authority.*

Traffic in the St. Lawrence Seaway (Montreal - Lake Ontario Section)

Vessel transits through this section were 6,809, both upbound and down-bound, with a registered gross tonnage of 25,131,200 tons. Cargo tonnage amounted to 20,310,346 tons, a 1.4 per cent decrease over 1959.

Overseas vessels made 2,197 transits carrying 7,942,712 tons of all types of cargo. This represents an increase of 22.2 per cent over ocean shipping for 1959 and accounts for 39.1 per cent of the total tonnage through this section. Inland trade vessels, or lakerees, made 3,927 transits, carrying cargoes of 12,337,266 tons, 60.7 per cent of all traffic, but a decrease of 11 per cent from inland shipping through the system for 1959.

Shipments of bulk cargo comprised 88.9 per cent of the seasonal total or more than 18,056,000 tons, compared with 18,643,000 tons in 1959. General cargoes, representing the balance of the traffic, reached 2,253,897 tons, an increase of 15.6 per cent over the first Seaway season.

*Available from the Queen's Printer, Ottawa—Cat. No. TS 2-260.

Traffic patterns according to the origin or destination of the voyages show that 30.8 per cent of the total movement was between two Canadian ports, one-third moved between Canadian and U.S. ports and 36.6 per cent consisted of foreign trade to and from Canada and the United States.

*Comparison of main commodity traffic in 1960
with similar traffic in 1959*

Commodity	1960 (tons)	Per cent of Total	1959 (tons)	Per cent of Total
		%		%
Wheat	3,853,923	19.0	3,367,375	16.4
Corn	1,101,854	5.4	934,606	4.5
Oats	498,455	2.5	731,744	3.6
Barley	1,177,552	5.8	1,143,880	5.6
Coal	1,020,467	5.0	1,188,766	5.8
Iron Ore	4,315,432	21.2	6,187,010	30.0
Pulpwood	257,968	1.3	289,402	1.4
Fuel Oil	1,177,697	5.8	1,123,900	5.5
Newsprint	272,814	1.3	277,486	1.3
All other Commodities	6,634,184	32.7	5,348,973	25.9
TOTALS	20,310,346	100.0	20,593,142	100.0

Traffic in Welland Canal

In the Welland Canal there were 7,536 transits in 1960. The registered gross tonnage of all transiting vessels was 35,528,265, an increase of 8.7 per cent compared with the previous year. Cargo tonnage amounted to 8,372,714 tons upbound and 20,876,975 downbound, for a total of 29,249,689 tons. Bulk cargoes accounted for 93.5 per cent of the traffic and 6.5 per cent of the commodities were general.

Tabulations show 22.4 per cent of the commodities were carried between Canadian ports, 3.6 per cent between United States ports and 54.1 per cent between United States and Canadian ports. Import and export trade from and to overseas harbours accounted for the remaining 19.9 per cent.

In quantity, iron ore led the bulk cargo which moved through the Welland Canal in 1960, being 26.8 per cent of the total traffic. Next in quantity was wheat, amounting to 15.4 per cent of the total tonnage. Coal accounts for another 15 per cent, while corn, barley, fuel oil and newsprint are the other significant bulk commodities.

Analysis of Commodity Traffic

Commodity	1960 (tons)	Percent of Total	1959 (tons)	Per cent of Total
		%		%
Wheat	4,490,511	15.4	3,766,845	13.7
Corn	1,335,329	4.6	1,132,745	4.1
Oats	559,007	1.9	817,975	3.0
Barley	1,423,488	4.9	1,370,556	5.0
Coal	4,396,884	15.0	4,824,917	17.5
Iron Ore	7,856,479	26.8	6,915,313	25.1
Pulpwood	274,274	.9	339,896	1.2
Fuel Oil	735,704	2.5	801,997	2.9
Newsprint	445,354	1.5	441,237	1.6
All other Commodities	7,732,659	26.5	7,125,077	25.9
TOTALS	29,249,689	100.0	27,536,558	100.0

The three main sources of tolls assessment revenue are shown below:

Basis of Assessment	St. Lawrence		Welland	
	Tons	Amount \$	Tons	Amount \$
Gross Registered Tonnage	25,015,526	983,500	35,293,024	681,779
Bulk Cargo	18,056,449	7,075,904	27,358,103	526,037
General Cargo	2,253,897	2,027,205	1,891,586	89,682

Traffic in the Non-Toll Canals

The non-toll canals include the Lachine, servicing a number of large industries, the remaining section of the Cornwall Canal and a portion of the old third Welland Canal. The Canadian lock at Sault Ste. Marie in the St. Mary's River is an alternative to the United States locks at that point.

Vessel transits and tonnages for these canals in 1960 were as follows:

Canal	No. of Transits	Gross Registered Tons	Cargo Tons
Lachine:			
Upbound	1,542	819,596	82,024
Downbound	1,692	1,047,349	1,158,680
Total	3,234	1,866,945	1,240,704
Cornwall:			
Upbound	203	136,251	183,112
Downbound	216	143,500	—
Total	419	279,751	183,112
Sault Ste. Marie:			
Upbound	1,551	3,252,089	712,458
Downbound	3,325	2,066,381	988,569
Total	4,876	5,318,470	1,701,027



A. G. Murphy, Chief Engineer of The St. Lawrence Seaway Authority, makes his speech of acceptance, on behalf of the Authority—at ceremonies conducted in the International Rapids Section of the Seaway, May 19, 1960—of a joint award by the American Society of Civil Engineers, to the two Seaway and power entities for the outstanding civil engineering achievement of 1960. Behind Mr. Murphy are representatives of the Hydro-Electric Society of Canada.

On the Montreal—Lake Ontario Section of the Seaway 9.7 per cent of the tolls were assessed on gross registered tonnage; 69.9 per cent on bulk cargo; 20.1 per cent on general cargo, and the remainder on passengers and minimum charges.

On the Welland Canal, gross registered tonnage accounted for 51.7 per cent of the total tolls; bulk cargoes 39.9 per cent; general cargoes 6.8 per cent, with the balance from passengers and minimum charges.

Engineering

The St. Lawrence Seaway - An Engineering Achievement

At a ceremony which took place at the Moses-Saunders Power Dam on May 19, 1960, the American Society of Civil Engineers named the St. Lawrence Seaway and Power Project as "The Outstanding Civil Engineering Achievement—1960" and presented each of the four participating entities with an appropriately embossed plaque in commemoration of the award. This ceremony provided a fitting climax to five years of close and friendly co-ordination of effort between the Saint Lawrence Seaway Development Corporation, their contracting agency, the United States Army Corps of Engineers, the Power Authority of the State of New York, the Hydro Electric Power Commission of Ontario and the Authority.

Although the major features of construction were completed prior to the opening of the Seaway, work continued throughout 1960 in completing a number of contracts and in improving some facilities, particularly on the Welland Canal.

Capital Works

The dredging carried out during the year included the virtual completion of the turning basin in Montreal Harbour, clean-up dredging in Lake St. Louis and at the upper end of Lake St. Francis, completion of the dredging programs in the north and south channels at Cornwall, and the letting and completion of a special contract covering the clean-up of the channel at the Brockville Narrows. There remains dredging clean-up in Montreal Harbour Turning Basin and in the Beauharnois Canal, the latter by the Quebec Hydro Electric Commission, and levelling off the disposal areas in Lake St. Francis and Lake St. Louis.

Early in the year an experimental installation was made of continuous timber fenders and of rubber fenders at selected locations on the entrance walls of the Beauharnois Locks. These proved most effective and further contracts have been let for similar installations at the St. Lambert and Cote Ste. Catherine Locks.

To prevent cross currents in the upper entrance to the Beauharnois Locks, a contract was let in December for the construction of a sheet pile barrier. This work was under way at the end of the year.

Heavy riprap protection was placed at selected locations along the channel banks between St. Lambert and Cote Ste. Catherine to prevent erosion.

Construction of the Cornwall North Channel Bridge proceeded as planned. Work on the substructure, divided into two main contracts, was completed during the year, and erection of the steel superstructure was under way. Plans for the provision of toll collection facilities, bus terminal, examining warehouse and maintenance building are in progress.

A firm of consultants has been engaged on the preparation of a performance specification and tender document for the fabrication and delivery of a self-propelled floating crane for use as a gate lifter. The documents were completed and issued to eight Canadian shipbuilding firms on October 7, 1960. Tenders are due on February 21, 1961.

The crane will be capable of lifting a 275-ton mitre gate leaf over the bow and of rotating it at minimum radius for stowage on the afterdeck. It will also be capable of handling about 150 tons athwartships at radii and clearances suitable for use in loading and unloading ships in Montreal Harbour. Delivery is slated for early in the 1962 navigation season.

Some landscaping still remains to be done at the various Seaway lock sites. Also planned is the clean-up and spreading of top soil over the areas fronting the South Shore municipalities, and restoration of the terrain on Cornwall Island.

Certain additional mooring facilities are proposed along the channel from below St. Lambert to Lake St. Louis, while the wharf provided above the Cote Ste. Catherine Lock requires backfilling.

Plans are in progress for the extension of the Seaway Collector Sewer to connect with the St. Hubert Sewer.

Contractor's Claims

At the end of 1960, claims filed by contractors engaged on Seaway construction reached a total of \$46,741,000. This figure includes certain items which, in the process of concluding contract payments, are found to be adjustable within the terms of the contracts, as in the case of approved additional work or additional quantities where dispute as to quantity determinations has arisen. The investigation of claims for a face amount of \$39,208,000 has been completed and offers of settlement involving about \$3,133,275 have been or are in course of being made. Claims which have been settled amounted to \$4,367,000 and involved payments of \$3,456,000, the most of which related to unit price adjustments arising from reclassification of material excavated or dredged. There remains a balance of claims totalling \$3,166,000 still under investigation.

Twinning of the Welland Canal

Studies have been undertaken by the Engineering Branch to develop the most practicable and economical means of twinning Locks Nos. 1, 2, 3, 7 and 8, which would provide for the eventual completion of a parallel system of locks throughout the entire length of the canal.

During the past year, extensive soil investigations and surveys have been carried out in the field. The information so obtained has been correlated with that recorded years ago in connection with the construction of the present canal system. A number of comparative layouts and plans are being prepared.

Operation

Seaway Rules and Regulations

Operating rules and regulations for ships using the Seaway are published jointly by the Seaway entities. Copies of the operating rules and regulations may be obtained in Canada from the Queen's Printer, Ottawa, and in the United States from the Saint Lawrence Seaway Development Corporation, Massena, N.Y.

The Navigation Season

The navigation season on the St. Lawrence River canals normally extends from the middle of April to the end of November and on the Welland Canal from the 1st of April to the middle of December. During this period, all Seaway structures are operated 24 hours a day, seven days a week.

Because of an earlier spring break-up in 1960, it was possible to open the St. Lawrence section of the Seaway to navigation on April 18th, seven days earlier than in 1959. On the Welland Canal, 1960 navigation commenced on April 1st, and at the Canadian Sault Ste. Marie Canal on April 6th. The St. Lawrence River Canals were officially closed on November 30th; the Canadian Sault on December 12th and the Welland Canal on December 15th.

Training and Experience

Prior to the opening of navigation, operating personnel participated in an intensive course at Cornwall Headquarters to review operating procedures.

Vessel handling and traffic flow in 1960 improved over the 1959 season.

On the Welland Canal, the new tie-up walls above and below the locks resulted in a smoother flow of vessel traffic and a reduced transit time. Modifications to fender booms assisted in the prevention of vessel mishaps. Unlike 1959, there was very little congestion caused by vessels awaiting entry to the canal. Generally, vessels were able to move much more expeditiously between Lakes Erie and Ontario.

Accidents and Delays

Delays to navigation resulted from different causes, the most common being high winds and fog, minor electrical and mechanical equipment failures such as blown fuses, broken shear pins on machinery, obstructions around gates and valves and vessels experiencing difficulty in approaching, entering and mooring in locks.

A total of 41 vessels on the Welland Canal were involved in accidents during the 1960 season, resulting in approximately 23 hours delay to navigation. In the 1959 season, 110 vessels were involved in accidents, resulting in approximately 128 hours delay.

Improvements

On the St. Lawrence River locks, experimental air bubbler systems were installed at the unwatering stoplogs to facilitate removal of the logs prior to the opening of navigation. Also, air jet pipes were installed on some of the lock-gates as an aid in forcing ice from the recesses behind the gates. New types of traffic control lights and directional signs were installed on the St. Lambert Lock Lift Bridge. Also, on the South Shore Canal, new machinery houses were constructed over the weir valve machinery.

On the Welland Canal, two new linesmen's shelters were constructed of concrete blocks as the beginning of a program to replace the old wooden shelters at each lock; the reforestation program was continued with the planting of 2,500 spruce trees to serve as windbreaks for vessels; and modifications were made to the traffic control system of the highway bridges.

New light standards were erected and placed in service along the new tie-up walls at the lock approaches. Modifications were made to the bascule bridge machinery to permit the bridges to be rolled further back from the lock wall.

On the non-toll canals work was begun on the construction of a new swing bridge over the third Welland Canal at Port Dalhousie and work on the clean-up of the second Welland Canal continued. At Sault Ste. Marie, work was begun on the construction of new machinery houses and a new sewage and water system was installed.

Maintenance

A complete program of preventive and corrective maintenance on all equipment, structures and machinery, including regular lubrication of all machinery parts and wire ropes for bridges, gates, valves and fenders, was carried out throughout the system. As a result of a study of the type of lubricants in use, some changes were instituted.

During the year extensive repairs to lock walls, approaches and other concrete structures were carried out. Some of these repairs were a result of damage by vessels, and in other cases a result of erosion. The wooden fendering placed at various locations along the seaway is expected to prevent a considerable amount of concrete damage by vessels in addition to performing the primary function of protecting vessels from damage.

Minor dredging operations for removal of high spots in canal channels were carried out by Authority forces, and riprap stone was placed at various locations along the South Shore and Welland canals to arrest bank erosion.

At Sault Ste. Marie, the program of refacing the north lock wall with concrete was continued and work was started on the fabrication of two new lock-gates. A new substation was installed with the necessary wiring changes and a program of modernizing the lock wiring was begun.

Maintenance of the old Cornwall and Lachine canals entailed repairs to lock structures and bridges, and painting where necessary.

Finance

It will be noted the income from tolls for the Lake Ontario-Montreal Section, while adequate to meet operating expenses falls short of the debt service required for interest.

The income from the tolls for the Welland Canal Section of the Seaway was inadequate to meet the current costs of its operation.

The report of the Auditor General states that on December 31, 1960, the Authority was indebted to the Government of Canada in a total amount of \$334,575,700, and that this indebtedness amounts to a total of \$339,927,117 at March 30, 1961.

At March 30, 1961, the Authority had borrowed the sum of \$320,500,000 under Section 13 of the Act. The difference, \$19,427,117, represented interest on capital borrowings during the construction period. It was capitalized at March 31, 1960, and deferred to January 1, 1963, in accordance with Section 25 of the Act and Order in Council P.C. 1956-1048. In the amount of \$320,500,000 is included \$9,500,000 borrowed to meet current interest accruing at the end of 1960 on capital borrowings, as well as interest on the \$19,427,117 capitalized interest.

In the light of the above circumstances pertaining to the Welland Canal and the payment of interest, the Authority is re-appraising its financial structure and is re-examining its financial position with respect to the Welland Canal.

Capital Construction

At December 31, 1960, expenditures on capital construction were as follows :

Construction and supply contracts	\$263,232,000
Land expropriations	7,300,000
Sundry (including field labour, cost of relocations of tracks, signals and communications; and payments to power entities for dredging in the International Section)	15,443,000
Equipment (shore, floating, shop, etc.)	1,200,000
Administration and Engineering expenses	17,800,000
	<hr/>
	\$304,975,000

Tolls

Tolls imposed on the Seaway for a one-way passage are based on the following tariffs:

Item	Montreal- Lake Ontario Section	Welland Canal Section
Toll per Gross Registered Ton	\$.04	\$.02
Toll per Bulk Cargo Ton . . . . .	.40	.02
Toll per General Cargo Ton . . . . .	.90	.05
Toll per Passenger	3.50	4.00

These tolls are subject to a minimum charge of \$4.00 per lock for each vessel.

The tolls derived from the Welland Canal accrue exclusively to Canada.

Totals of tolls assessed for the 1960 season of navigation are as follows:

St. Lawrence Section (Montreal to Lake Ontario)

Canada	\$7,156,249
United States	2,956,055

\$10,112,304

Welland Canal 1,326,497

It may be noticed that the traffic report of the St. Lawrence Seaway for 1960 showed total toll revenues for the St. Lawrence Section (Montreal to Lake Ontario) of \$10,109,059 and for the Welland Canal, \$1,318,357. The respective differences between the figures in the statistical report and the totals shown above as actual recorded revenues are due to the fact that there were accrued toll revenues recorded as at December 31, 1959, based on estimated assessments of steamship companies' reports which had not been filed as at that date. During

1960, when actual assessments were prepared based upon the companies' reports, adjustments between estimated and actual assessments were necessary. These adjustments pertaining to 1959 toll revenues were recorded in the 1960 accounts of the Authority.

A revised requirement for toll financial security was established toward the end of 1960, following close collaboration with the Saint Lawrence Seaway Development Corporation of the United States and meetings with the associations representing shipping.

Security may be furnished in one of the following ways: i) a money deposit with the Authority, or with a chartered bank in Canada or a bank in the United States of America; ii) negotiable bonds of the Government of Canada or of the Government of the United States of America; or iii) a bank letter of guarantee.

The security deposit in the case of one vessel must be sufficient to cover the gross registered tonnage of that vessel at \$1.00 per ton for transit each way.

On completion of a transit, a vessel will have incurred the applicable tolls and these tolls will be related to the security for that transit until paid.

The security must be maintained for each single transit. A transit is not a "round trip" but consists of a trip upbound or a trip downbound whether any such trip is complete or partial. Therefore, security to cover a vessel that is to travel upbound and then downbound under the same pre-clearance will consist of an amount equal to \$2.00 for every gross registered ton of the vessel.

Where a representative is acting on behalf of a number of vessels owned or controlled by one person or company, security may be furnished in an amount assessed by the representative as being equal to \$1.00 per gross registered ton for the maximum gross registered tonnage of such vessels within the Seaway at any one time.

On completion of a transit, each vessel will have incurred the applicable tolls and these tolls will be related to the total security with respect to that transit until the tolls are paid. This security must be maintained at all times in relation to actual total tonnage of the vessels transiting at any one time.

Income and Expense

The Statement of Income and Expense for the year reflects the results of the first full year of Seaway operation by the Authority. It should be noted, in comparing the results of operations for the years 1959 and 1960, that while income has been recorded for two full navigation seasons, expenses in 1959 related to approximately a nine-month period, whereas expenses in 1960 related to a full twelve-month period, with the resultant increase in Administrative, Operating and Maintenance costs. There is also included in the 1960 expenses an extraordinary charge for maintenance, due to a continuing programme of improvements necessary to bring the existing Welland Canal facilities up to Seaway standards.

Authority income amounted to \$9,360,642, comprising toll revenue of \$7,156,249 assessed for transits through the Seaway locks between Montreal and Lake Ontario, and \$1,326,497 on transits through the Welland Canal, plus sundry revenues (rentals, wharfage, bridge revenue, etc.) amounting to \$877,896.

Operating and Maintenance expenses amounted to \$4,873,082, and Administrative expenses were \$1,323,950, making a total of \$6,197,032, including an amount of \$288,089 for non-toll canals. The resulting net administration and operating cost is \$5,908,943. Net operating income available for debt service was, therefore, \$3,451,699, and this amount has been paid to the Government on account of interest on Capital Debt. The applicable interest charge was \$12,791,197. After recording a charge of \$92,190 for replacement of movable capital assets, a net loss of \$9,431,688 for the year is shown.

In 1959, the Authority provided the sum of \$3,955,065 for depreciation of its assets. However, since costs that were the basis of tolls include amounts sufficient to amortize the principal of the amounts borrowed for capital expenditures over a period of fifty years, it is not necessary to provide for depreciation and the sum of \$92,190 is sufficient to cover replacement costs of assets having an estimated lifetime of less than fifty years.

Statement of Income and Expense

	St. Lawrence River (Montreal to Lake Ontario)	Welland Canal	Total
Income:			
Tolls assessed	\$ 7,156,249	\$ 1,326,497	\$ 8,482,746
Miscellaneous	131,599	746,297	877,896
	<u>\$ 7,287,848</u>	<u>\$ 2,072,794</u>	<u>\$ 9,360,642</u>
Expense:			
Operating, maintenance and proportion of administrative expense	<u>\$ 2,109,658</u>	<u>\$ 3,799,285</u>	<u>\$ 5,908,943</u>
Net operating income (or deficit) available for debt service	\$ 5,178,190	\$ -1,726,491	\$ 3,451,699
Interest	<u>\$11,532,543</u>	<u>\$ 1,258,654</u>	<u>\$ 12,791,197</u>
Amount by which interest was not earned	\$ 6,354,353	\$ 2,985,145	\$ 9,339,498

Statement of Source and Application of Revenue (Canadian portion)

Source	Dollars	%
Seaway tolls	\$8,482,746	90.16
Bridge revenue	78,051	.83
Miscellaneous	799,845	8.50
Decrease in working capital	48,301	.51
	<u>\$9,408,943</u>	<u>100.0</u>
Application		
Salaries and employee benefits	\$3,787,316	40.25
Supplies, services and other costs	2,121,627	22.55
Interest paid on debt	3,500,000	37.20
	<u>\$9,408,943</u>	<u>100.0</u>

Financial Statements

Appended to this report is a copy of the Auditor General's report for the year ended December 31, 1960, together with the balance sheet and statements of income and expense.

Personnel

Two Labour Agreements signed with the Canadian Brotherhood of Railway, Transport & General Workers, covering the Headquarters Office Staff and the Operations and Maintenance Staff, expired on December 31, 1960. Negotiations for new agreements began on December 5, 1960, and were still in progress as of the date of this report.

At the end of 1960, the regular staff of the Authority had decreased from 1,299 to 1,215, mainly as a result of the reduction in the number of employees in the construction forces.

The members of the Authority take pleasure in expressing their appreciation for the loyal and effective services rendered by the officers and employees of the Authority.



Construction progress on the new North Channel span of the Cornwall-Massena International Bridge is shown above.

The Cornwall International Bridge Company Limited

In September, 1957, the Authority and the Development Corporation each acquired one-half of the outstanding capital stock—consisting of 2,000 common shares—of the Cornwall International Bridge Company Limited.

The Bridge Company is incorporated under the Dominion Companies Act, 1934, and is scheduled as a Crown corporation under Schedule D of the Financial Administration Act. Its fiscal year runs from October 1st to September 30th. The company is administered by a Board of Directors of eight members. Four members are officials of the Development Corporation and four are officials of the Authority. The Authority President is Chairman of the Board.

The bridge operates on a toll basis and the tariff of tolls has been approved by the Board of Transport Commissioners for Canada. Tolls are collected on the Canadian side only and an accounting is made to the Development Corporation for fifty per cent of the revenue.

The accounts and financial transactions of the Bridge Company are maintained by the Comptroller's Branch of the Authority, and are audited by the Auditor General of Canada. The Auditor General's report for the year ended September 30, 1960, shows that total income was \$337,187 as against \$320,046 for the previous year.

Ottawa, March 30, 1961.

THE HONOURABLE LEON BALCER,
Minister of Transport,
Ottawa.

SIR,

The accounts and financial statements of The St. Lawrence Seaway Authority have been examined for the year ended December 31, 1960.

Section 25 of the St. Lawrence Seaway Authority Act provides that the Minister of Finance, with the approval of the Governor in Council, may from time to time make loans to the Authority. Section 13 of the Act, as amended, states that the aggregate of the amounts so borrowed under the Act and outstanding shall not at any time exceed \$335,000,000.

The accompanying balance sheet of The St. Lawrence Seaway Authority shows that the Authority was indebted to the Government of Canada on December 31, 1960 in respect of loans and unpaid interest thereon in the total amount of \$334,575,700, made up as follows:

Loans under section 25 of the Act	\$305,500,000
Interest on loans—matured and capitalized	19,427,117
Interest on capital debt unpaid for year 1960	9,648,583
	<hr/>
	334,575,700

During the year ended December 31, 1960 the Authority borrowed \$20,000,000 from the Government of Canada and repaid from its 1959 net earnings \$5,000,000 in reduction of the interest on loans matured and capitalized. During the subsequent period January 1, 1961 to March 30, 1961 the Authority borrowed a further amount of \$15,000,000 of which principal amount \$9,648,583 was repaid to the Government to cover the interest unpaid on the capital debt for the year ended December 31, 1960, shown above. As at March 30, 1961 the Authority was indebted to the Government of Canada in respect of loans and unpaid interest thereon in the total amount of \$339,927,117 exclusive of interest accrued for the period since January 1, 1961.

Section 16 of the Act requires that tolls be designed to provide a revenue sufficient to defray the cost to the Authority of its operations, which costs, in addition to those of operating and maintaining the canals and works, are defined under subsections (a) and (b) as being payments in respect of the interest on amounts borrowed by the Authority and amounts sufficient to amortize the principal of amounts so borrowed over a period not exceeding fifty years. Pursuant to these provisions, loans made to the Authority under section 25 of the

Act require the payment of interest only in the first three full years of operation (through the year ending December 31, 1962) and thereafter payment of annual amounts sufficient to amortize over a period of forty-seven years (or by December 31, 2009) all loans and interest thereon.

The costs of operating and maintaining the canals and works under the administration of the Authority are defined under subsection (c) of section 16 as including all operating costs of the Authority and such reserves as may be approved by the Minister. The necessity of including depreciation as an element of operating and maintenance cost has been reviewed by the Authority in whose opinion the amortization over the fifty year period of the principal of the amounts borrowed together with interest as required by subsections (a) and (b) meets the requirements of the Act. Accordingly, no provision for depreciation has been included in the costs for the year under review and the Authority has reversed the provision for depreciation made during its fiscal year ended December 31, 1959 in the sum of \$4,062,505. An amount of \$144,298 was provided during the year under review toward the cost of replacement of movable equipment having an estimated lifetime of less than fifty years.

In compliance with the requirements of section 87 of the Financial Administration Act, I now report that, in my opinion, subject to the above observations:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statements of the Authority
 - (i) were prepared on a basis consistent with that of the preceding year save for the discontinuance of the depreciation charge as explained above, and are in agreement with the books of account,
 - (ii) in the case of the balance sheet, give a true and fair view of the state of the Authority's affairs as at the end of the financial year, and
 - (iii) in the case of the statement of income and expense, give a true and fair view of the income and expense of the Authority for the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

A. M. HENDERSON,
Auditor General.

THE ST. LAWRENCE SEAWAY AUTHORITY

(Established by the St. Lawrence Seaway Authority Act)

Balance Sheet as at December 31, 1960

(With comparative figures as at December 31, 1959)

ASSETS		1960	1959	LIABILITIES		1960	1959
Current Assets:				Current Liabilities:			
Cash		\$ 603,771	\$ 473,629	Accounts payable		\$ 3,282,804	\$ 3,255,495
Accounts receivable (less provision for doubtful accounts)		1,066,096	878,964	Due to Saint Lawrence Seaway Development Corporation re tolls		38,580	134,570
Due from Government of Canada re non-toll canals		620,392	954,733	Contractors' holdbacks		881,536	2,961,392
Inventories of materials, minor equipment, and shop work in progress—at cost		858,214	912,111	Interest payable on capital debt		9,648,583	—
Total Current Assets		3,148,473	3,219,437	Total Current Liabilities		13,851,503	6,351,457
Bonds and Cash held as Contractors' Security and other Deposits (contra)		911,759	3,073,983	Contractors' Security and other Deposits (contra)		911,759	3,073,983
Investment in Shares of Cornwall International Bridge Company Limited		200,000	200,000	Reserve for Replacement of Movable Equipment		596,474	—
Capital Assets, at cost:				Proprietary Equity of the Government of Canada:			
Land		\$ 9,261,334	9,149,497	Capital Assets entrusted, as at April 1, 1959, to the Authority by the Governor in Council under section 14 of the Act			
Buildings		6,837,851	7,469,851	Welland Ship Canal		\$130,703,844	130,716,890
Movable equipment		8,837,748	9,474,474	Non-toll canals and other properties at Lacrosse, Cornwall, Sault Ste. Marie and Niagara Peninsula		51,111,823	48,636,075
Channels, canals, and locks		364,337,312	291,950,204			181,815,667	179,352,965
Bridges, including alterations to existing structures		57,914,424	47,258,662	Loans under section 25 of the Act		305,500,000	285,500,000
Movable equipment—including shore, floating, shop and other equipment		3,442,959	3,352,849	Interest on loans—matured and capitalized		19,427,117	24,427,117
Works under construction		3,775,858	75,274,805			506,742,784	489,280,082
Less: Accumulated provisions for depreciation		454,553,448	441,366,489	Deduct: Deficit, per Statement of Deficit		12,177,017	6,688,306
		—	4,473,684			494,565,767	482,591,776
Non-toll canals and other properties at Lacrosse, Cornwall, Sault Ste. Marie and Niagara Peninsula		51,111,823	48,630,991			509,925,503	492,017,216
			505,665,271				
			509,925,503				

Note: Outstanding commitments under uncompleted contracts as at December 31, 1960, amounted to \$8,100,000. In addition, claims for extra compensation made by certain contractors in respect of certain contracts have been received by the Authority.

Certified correct:

D. W. G. OLIVER
Comptroller

Approved:

R. J. RANKIN
President

The above Balance Sheet and the related Statements of Income and Expense and of Deficit have been examined and reported upon under date of March 30, 1961, to the Minister of Transport, as required by section 67 of the Financial Administration Act.

A. M. HENDERSON
Auditor General of Canada

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Income and Expense for the year ended December 31, 1960

(with comparative figures for the period April 25 to December 31, 1959)

Income	1960	1959
Tolls assessed	\$8,482,746	\$8,329,341
Rentals	498,293	498,818
Wharfage	177,405	183,573
Miscellaneous	202,198	202,743
	<u>\$9,360,642</u>	<u>9,214,475</u>
Expense (Schedule "A")		
Operating expenses	2,321,417	1,641,926
Maintenance expenses	1,687,817	701,394
Operating and maintenance supervision	863,848	574,181
Administrative expenses	1,323,950	1,134,955
	<u>6,197,032</u>	<u>4,052,456</u>
Deduct: Portion of supervision and administrative expenses applicable to non-toll canals	<u>288,089</u>	<u>99,236</u>
	<u>5,908,943</u>	<u>3,953,220</u>
Net operating income before providing for interest and for replacement of movable equipment	<u>3,451,699</u>	<u>5,261,255</u>
Interest on loans from the Government of Canada (not in- cluding \$357,386 added to construction costs)	12,791,197	7,994,496
Provision for replacement of movable equipment (not in- cluding \$52,108 charged to other accounts)	92,190	—
Provision for depreciation	—	3,955,065
	<u>12,883,387</u>	<u>11,949,561</u>
Net loss for the year	<u><u>9,431,688</u></u>	<u><u>6,688,306</u></u>

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Expense for the year ended December 31, 1960

(with comparative figures for the period April 25 to December 31, 1959)

	1960	1959
Operating expenses:		
Channels, canals and locks	\$1,350,208	\$1,149,979
Bridges	517,430	364,773
Grants in lieu of municipal taxes	410,897	112,616
Miscellaneous	42,882	14,558
	<u>\$2,321,417</u>	<u>1,641,926</u>
Maintenance expenses:		
Channels, canals and locks	831,408	402,864
Bridges and tunnel	472,990	124,842
Dredging and aids to navigation	149,517	23,094
Canal lands and roads	114,860	51,040
Power transmission lines and canal lighting	50,495	27,184
Minor equipment	37,878	—
Miscellaneous	30,669	72,370
	<u>1,687,817</u>	<u>701,394</u>
Operating and maintenance supervision:		
Salaries	660,847	491,812
Engineering services	97,880	—
Office expenses	42,443	31,663
Travel	23,671	27,055
Miscellaneous	39,007	23,651
	<u>863,848</u>	<u>574,181</u>
Administrative expenses:		
Salaries of members and executive officers	109,105	64,833
Other salaries	570,573	441,912
Employee benefits	383,073	345,972
Office accommodation	69,075	66,399
Grant in lieu of taxes	49,188	—
Travel and removal	38,808	42,474
Printing, stationery and office supplies	37,109	64,656
Communications	21,044	45,783
Provision for doubtful accounts	30,000	50,000
Miscellaneous	15,975	12,926
	<u>1,323,950</u>	<u>1,134,955</u>
Total expense	<u><u>6,197,032</u></u>	<u><u>4,052,456</u></u>

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Deficit for the year ended December 31, 1960

Deficit as at January 1, 1960		\$6,688,306
Deduct:		
Provision for depreciation for the year 1959 reversed pursuant to policy decision of the Authority	\$4,062,505	
Additional expenditures in 1959 (net) transferred to non-toll canal expense	14,875	
		<hr/> 4,077,380
		2,610,926
Add:		
Provision with respect to 1959 for replacement of movable equipment having an estimated lifetime of fifty years or less	134,403	
Net loss for the year, per Statement of Income and Expense	9,431,688	
		<hr/> 9,566,091
Deficit as at December 31, 1960		<hr/> <hr/> 12,177,017

THE ST. LAWRENCE SEAWAY AUTHORITY

Non-Toll Canals

Statement of Expense, Income and Capital Expenditures for the year ended December 31, 1960

(with comparative figures for the period April 1 to December 31, 1959)

Expense	1960	1959
Operating expenses:		
Channels, canals and locks	\$ 315,399	\$ 207,698
Bridges	101,755	65,253
Grants in lieu of taxes	231,043	—
	<u>\$ 648,197</u>	<u>272,951</u>
Maintenance expenses:		
Channels, canals and locks	136,887	49,750
Bridges	92,491	31,183
Wharves and docks	13,681	7,904
Canal lands and roads	58,094	30,067
Power transmission lines and canal lighting	7,088	5,068
Miscellaneous	51,133	28,463
	<u>359,374</u>	<u>152,435</u>
Operating and maintenance supervision	223,760	145,725
Portion of supervision and administrative expenses applicable to non-toll canals	288,089	99,235
Employee benefits	101,054	—
Expenditure on uncompleted work orders and unabsorbed overhead	85,349	159,886
	<u>1,705,823</u>	<u>830,232</u>
Income		
Rentals	268,409	168,894
Wharfage	111,593	100,719
Miscellaneous	61,391	43,792
	<u>441,393</u>	<u>313,405</u>
Operating deficit	1,264,430	516,827
Capital expenditures:		
Construction of works	1,242,356	1,137,908
Acquisition of equipment	21,269	748
	<u>1,263,625</u>	<u>1,138,656</u>
Operating deficit and capital expenditures recovered or recover- able from parliamentary appropriations	2,528,055	1,655,483
Recovered from:		
Department of Transport 1959-60 appropriations, Votes 397 and 586	499,156	
Department of Transport 1960-61 appropriations, Votes 406, 557 and 645	1,408,507	
	<u>1,907,663</u>	
Balance to be recovered from Department of Transport	620,392	
	<u>2,528,055</u>	

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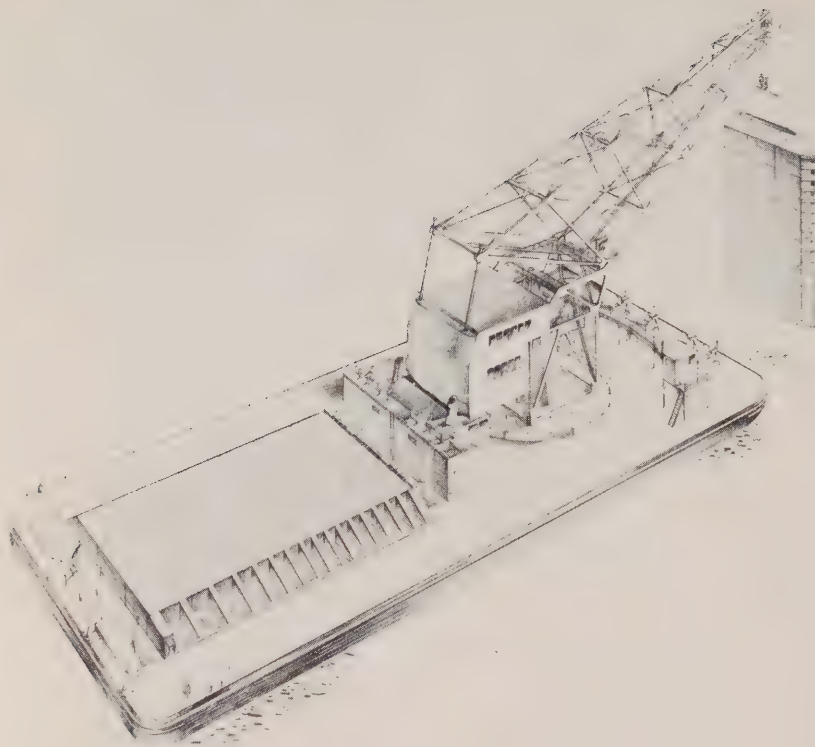


*THE ST. LAWRENCE
SEAWAY AUTHORITY*

ANNUAL REPORT

1961





SELF-PROPELLED REVOLVING CRANE AND GATE-LIFTER

THE ST. LAWRENCE SEAWAY
AUTHORITY

ANNUAL
REPORT
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THE ST. LAWRENCE SEAWAY AUTHORITY

April 17, 1962.

THE HONOURABLE LEON BALZER,
Minister of Transport,
Ottawa, Ontario.

Dear Sir:

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1961, to December 31, 1961, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

R. J. RANKIN,

President.

THE ST. LAWRENCE SEAWAY AUTHORITY

R. J. RANKIN, President

PIERRE CAMU, Vice-President

EXECUTIVE OFFICERS

R. J. BURNSIDE *Director of Operation and Maintenance*

L. A. COUTURE *General Counsel*

P. E. R. MALCOLM *Secretary and Director of Administration*

A. G. MURPHY *Chief Engineer*

D. W. G. OLIVER *Comptroller*

NOTE: Mr. J. M. Martin succeeded Mr. D. W. G. Oliver as Comptroller,
January 1, 1962.

Mr. L. H. Burpee succeeded Mr. A. G. Murphy as Chief Engineer,
March 1, 1962.

Photograph of instructional class by Marcel Quenneville,
The Cornwall Standard-Freeholder.

ROGER DUHAMEL, F.R.S.C.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1962

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THE ST. LAWRENCE SEAWAY AUTHORITY

ANNUAL REPORT 1961

This is the eighth report published by The St. Lawrence Seaway Authority. Established as a Corporation by Chapter 24, S.C., 1951, now Chapter 242, R.S.C., 1952, the Authority now reports on its third year of operation of the 27-foot navigational facilities that were constructed in the years 1954 to 1959 between Montreal and Lake Erie.

The St. Lawrence Seaway opened officially on June 26, 1959. The 1961 report, as did the 1960 report, deals with the operation and administration of the Seaway system and of the other canals transferred from the Department of Transport to the Authority by Order-in-Council, P.C. 1959-204.

The St. Lawrence Seaway Authority is pleased to give recognition to the continuity of good relations with the Saint Lawrence Seaway Development Corporation of the United States and to acknowledge the co-operation of Government Departments, both Federal and Provincial, the various power entities in Canada and the United States, other public and private bodies, the press and in particular the shipping organizations whose members provide the traffic for the St. Lawrence Seaway.

Traffic

A detailed Traffic Report of the St. Lawrence Seaway for 1961 has been prepared by the Saint Lawrence Seaway Development Corporation of the United States and the Authority.*

Traffic in the St. Lawrence Seaway

The traffic pattern through the St. Lawrence and Welland Canals during 1961 showed several significant changes both in volume, type of traffic, and commodities carried. The most noticeable factor was, of course, a heavy upward swing in downbound traffic during the latter part of the navigation season, due to the release of enormous shipments of grain from the Lakehead to Lower St. Lawrence ports and overseas. This traffic pushed the total tonnage on both the Welland and St. Lawrence Canals to an all-time high, exceeding 31,454,000 on the Welland and 23,417,000 on the St. Lawrence.

*Available from the Queen's Printer—Cat. No. TS 2-261

Montreal—Lake Ontario Section

Vessel transits through this section of the Seaway were 6,892, both upbound and downbound for the 1961 navigation season compared with 6,869 in 1960. The gross registered tonnage of the vessels making these transits was 28,909,000 with 8,234,000 tons of cargo carried upbound and 15,183,000 tons downbound. The cargo tonnage was therefore on the whole 15.3% more than in 1960 and 99.1% over that recorded in 1958, the last year the former canals were in use.

Statistics by type of vessel showed that overseas ships made 2,151 transits through the Seaway with 7,347,000 tons of cargo. This represented a decrease of 7.5% for ocean shipping from 1960 and accounted for 31.4% of the total tonnage through the canal.

Inland trade vessels or lakers made 2,091 trips upbound and 2,066 transits downbound, carrying cargoes of 16,011,000 tons, 68.4% of all traffic and an increase of 35.3% in total inland shipping through the canal for 1960.

Shipments of bulk cargo comprised 91.1% of the season total or more than 21,343,000 tons compared with 18,056,000 tons in 1960. General cargoes, the balance of the traffic, ran to 2,074,000 tons, a decrease of 8.0% from the last Seaway season.

Direction	Bulk Cargoes					
	Increase or Decrease		Increase or Decrease		Increase or Decrease	
	1959	1960	1959	1960	1961	1962
Upbound	9,638,420	7,678,985	—	—20.4	7,015,145	—8.7
Downbound	9,004,559	10,377,464	—	+15.2	14,328,392	+38.1
Total	18,642,979	18,056,449	—	—3.2	21,343,537	+18.2

Upbound bulk cargoes decreased in both 1960 and 1961 from the previous year, reflecting a falling off of iron ore shipments. Downbound cargoes showed the reverse trend with heavy increases due to the movement of large grain stocks to the Lower St. Lawrence ports and overseas.

Movements according to the origin or destination of the vessel showed that with respect to the transits

through this section of the Seaway, 38.6% of the total traffic was between two Canadian ports, another 29.2% moved between Canadian and U.S. ports, 31.7% consisted of foreign trade to and from Canada and the United States, while only .5% of the commodities through the St. Lawrence had both a U.S. origin and a U.S. destination.

A comparative summary of the total upbound and downbound traffic for the St. Lawrence section is as follows:

Item	1959	1960	1961
No. of Transits	7,452	6,869	6,892
Net Registered Tons	16,249,082	16,158,261	18,931,388
Gross Registered Tons	25,085,995	25,131,250	28,908,578
Cargo—Bulk	18,642,979	18,056,449	21,343,537
General	1,950,163	2,253,897	2,074,183
Toll Revenue \$	10,052,234	10,109,059	11,407,060

The table following immediately below indicates the traffic for selected commodities through the Montreal-Lake Ontario Section of the Seaway. Wheat is now the most important single product transiting this section, with the total tonnage increasing by 69.2% over 1960. Iron ore is second in amount although showing a decrease of 6.9% from 1960 for a total of 17.2% of all traffic through this section of the Seaway. Corn, barley, coal and fuel oil are the other commodities accounting for a significant portion of the total tonnage.

Commodity	1960	Percent of Total	1961	Percent of Total
		%		%
Wheat	3,853,923	19.0	6,521,068	27.8
Corn	1,101,854	5.4	1,601,590	6.8
Oats	498,455	2.5	271,328	1.2
Barley	1,177,552	5.8	692,727	3.0
Coal	1,020,467	5.0	1,155,528	4.9
Iron Ore	4,315,432	21.2	4,017,254	17.2
Pulpwood	257,968	1.3	176,887	.8
Fuel Oil	1,177,697	5.8	1,103,652	4.7
Newsprint	272,814	1.3	290,122	1.2
All Other Commodities	6,634,184	32.7	7,587,564	32.4
TOTAL	20,310,346	100.0	23,417,720	100.0

Welland Section

The composition of waterborne traffic through the Welland Canal differs somewhat from cargoes transiting the St. Lawrence portion of the Seaway. While many ships enter the Seaway from foreign ports and traverse both canals, there was, however, a substantial amount of what might be termed local traffic between U.S. and Canadian ports through the Welland Canal. These movements were largely made up of downbound shipments of iron ore, coal and grain.

Vessel transits through the Welland were 3,895 upbound and 3,852 downbound in 1961 for a total of 7,747 compared with 7,536 in 1960. The registered gross tonnage of all vessels was 40,724,000, an increase of 14.6% over the previous year. It is interesting to note that, of this total, 14,090,000 gross tons or 34.6% were ballast transits or vessels engaged in one-way traffic. Cargo tonnage amounted to nearly 7,668,000 tons upbound and 23,787,000 downbound, a decrease of 7.3% westward and an increase of 13.9% eastbound over last year. Cargoes classified as bulk shipments accounted for 94.0% of the Welland Canal traffic and 6.0% of the commodities were listed as general.

A large percentage of the Welland Canal shipments was interlake traffic between Canadian and United States ports. Tabulations show 28.6% of the commodities were carried between Canadian ports, 3.1% between United States ports and 48.4% between United States and Canadian ports. Import and export trade from and to overseas harbours accounted for the remaining 19.9%.

A general summary of the shipping activities on the Welland Canal is contained in the following table:

Item	1959	1960	1961
No. of Transits	8,072	7,536	7,747
Net Registered Tons	21,955,360	23,924,407	27,739,846
Gross Registered Tonnage	32,684,316	35,528,265	40,724,078
Cargo—Bulk	25,692,995	27,358,103	29,576,436
General	1,843,563	1,891,586	1,878,367
Toll Revenue \$	1,229,301	1,318,357	1,460,451

Following the pattern of the St. Lawrence Section, wheat was the most important commodity to transit the Welland section of the Seaway from the point of view of volume and formed 22.9% of the total traffic for 1961. Iron ore dropped from first to second place with 21.2% of the total, with coal the third most important product and 13.9% of the total tonnage. Corn accounted for another 5.8% of the traffic, while barley, fuel oil and newsprint were the other significant commodities.

Commodity	1960	Percent of Total	1961	Percent of Total
		%		%
Wheat	4,490,511	15.4	7,218,003	22.9
Corn	1,335,329	4.6	1,821,618	5.8
Oats	559,007	1.9	344,478	1.1
Barley	1,423,488	4.9	898,772	2.9
Coal	4,396,884	15.0	4,356,729	13.9
Iron Ore	7,856,479	26.8	6,672,124	21.2
Pulpwood	274,274	.9	245,471	.7
Fuel Oil	735,704	2.5	831,211	2.6
Newsprint	445,354	1.5	476,294	1.5
All Other Commodities	7,732,659	26.5	8,590,103	27.4
TOTAL	29,249,689	100.0	31,454,803	100.0

Traffic in the Non-Toll Canals

Vessel transits and tonnages for these canals in 1961 were as follows:

Canal	No. of Transits	Gross Registered Tons	Cargo Tons
Lachine			
Up	965	762,371	40,003
Down	1,160	1,063,659	1,052,952
Total	2,125	1,826,030	1,092,955
Cornwall			
Up	200	136,168	193,438
Down	189	130,563	—
Total	389	266,731	193,438
Sault Ste. Marie			
Up	1,342	2,871,805	475,263
Down	2,113	1,635,741	672,122
Total	3,455	4,507,546	1,147,385

Tolls

The Seaway traffic as described yielded toll revenue in 1961 totalling \$12,867,511. The following table compares toll revenues for the three seasons during which the St. Lawrence Seaway has operated.

Area	1959	1960	1961
	\$	\$	\$
St. Lawrence (Canadian Funds)	7,102,209	7,153,842	8,078,448
St. Lawrence (United States Funds)	2,950,025	2,955,217	3,328,612
Welland	1,229,301	1,318,357	1,460,451
Total	11,281,535	11,427,416	12,867,511

ENGINEERING

Self-Propelled Floating Revolving Crane and Gate Lifter

A contract for the construction of this major piece of equipment was entered into with Marine Industries Limited on May 19, 1961, following the development of an acceptable performance specification by Sir Alexander Gibb and Partners, Consultants. Fabrication is now under way and it is expected that the equipment will be ready for testing late in the summer of 1962.

This mammoth, dual purpose, fully-revolving crane, with the tip of its jib reaching above water level as much as the height of a 15-storey building, will be mounted on a pontoon some 200 feet long by 75 feet wide. As a gate-lifter, for Seaway purposes, it will be able to lift a 275 ton mitre gate leaf over the bow, swing it at minimum radius and stow it on the after deck of the pontoon. As a cargo crane, for harbour purposes, it will be able to handle 150 ton lifts, athwartships, to and from ocean vessels. To provide for selfpropulsion in still waters and to improve manoeuvrability, the pontoon is being equipped with two Voith-Schneider cycloidal propellers, one at each end. The diesel-electric power plant, controls and all other facilities will be the most efficient and modern types available.

Standby Engines, Welland Canal Bridges

It was realized in 1960 that the original gasoline type standby engines installed in the movable bridges some 30 years ago had reached a point where the cost and difficulty of making necessary repairs on equipment so obsolete that parts were no longer obtainable, made it most desirable to replace these engines with modern units of the diesel type. The cost of the newer type engines and a modern type of drive suitable to the requirements was considerably less than that of replacing the old equipment in kind.

Four bridges were re-equipped with the new type standby engines and drive in 1961, and a contract has been let for the installation of similar equipment at five more bridges in 1962.

Bridge-O-Matic Control Systems, Welland Canal Bridges

As a result of studies made, it has been decided to install the Bridge-O-Matic system of control at certain movable bridges adjacent to locks. This system permits the operation of the bridge by remote control by the lock operator in the lock control room.

It is proposed to install this system at Bridges 1, 7, 9 and 19 in 1962, the necessary materials having been ordered late in 1961.

Hydraulic Improvements, Welland Canal Locks

A program of testing and research was instituted in 1960 to ascertain methods by which the lock filling and emptying times could be reduced. This required the co-ordinated efforts of both the hydraulic and electrical-mechanical sections and resulted in a modified valve operating procedure employing a variable speed type of motor and control, combined with modifications to the hydraulic ports.

Fifty motors of the new type were purchased in 1961 and were delivered late in the season. Installations were made for the valves at Lock 7 and East Lock 5, and the performance fully met that expected. In conjunction with the hydraulic modifications of the ports, *the lock filling time was reduced to 8½ minutes compared to the 15 minutes previously required.* The emptying time may be further reduced to approximately 7½ minutes. These are substantial savings in time, and will result in a valuable increase in the traffic capacity of the canal. Further installation of the motors is proceeding.

Rehabilitation of Rolling Lift Bridges, Welland Canal

Work commenced in the winter of 1960-61 on the rehabilitation of the worn track girders and the treads for the segmental girders of the rolling lift bridges. This work is continuing during the 1961-62 non-navigation season and is expected to be completed this season.

Modification of Mitre Gate Sills, Welland Canal

Since their construction some 30 years ago the woodfaced mitre gate sills have required constant maintenance. In December, 1959, a program of replacement of these sills was instituted. The revised design provides permanent steel and concrete sills with rubber seals to minimize leakage. This work is now in its third season and is expected to be completed for the opening of navigation in 1962.

Timber Fenders on Lock Entrance Walls

As a result of experience gained during the first season of operation of the Seaway, it was considered

most desirable that some form of fendering be provided at the entrance walls to minimize damage to ships which might strike or scrape against the concrete. A design utilizing white oak timbers over some faces and butyl rubber supported on steel wire ropes over other faces was adopted, and has now been installed at most of the locks in the system. The fenders at the Beauharnois Locks were installed in the winter of 1959-60, while those at the Cote Ste. Catherine and St. Lambert Locks, and at Locks 1, 4, 6 and 7 of the Welland Canal were installed in the winter of 1960-61. Fenders at Lock 8 and additional fenders at Locks 1, 2 and 3 and at the Guard Gate on the Welland Canal are being installed during the winter of 1961-62.

Pondage Above Lock 7, Welland Canal

As a result of studies for improved efficiency, a contract has been let for the increase of the pondage area above Lock 7 by the excavation of a part of Thorold Park. The material removed will be used for the clean up of the swampy area known as Marlatt's Pond.

Improvements to Reclaimed Area, City of Longueuil

A contract was let for the trimming of slopes, provision of drainage and placing of top soil on the reclaimed area east of the Seaway Channel in the City of Longueuil. The work commenced and was completed in the fall of 1961.

Extension of Upper Entrance Wall at Upper Beauharnois Lock

To reduce a troublesome cross current at the upper entrance to the Upper Beauharnois Lock, a contract was signed on November 9, 1961 with Pentagon Construction Co. Ltd. for the construction of a 490 foot extension to the existing entrance wall. The work is scheduled for completion by May 15, 1962.

Clean Up of Second Welland Canal

The clean up of the Second Welland Canal where it passes through the Town of Thorold and the City of St. Catharines was completed in 1961. This work, initiated by the Department of Transport, was carried out by the Authority in accordance with the agreements reached with the municipalities concerned.

Swing Bridge at Port Dalhousie, Third Welland Canal

The old highway crossing at the Port Dalhousie Lock was both inadequate and hazardous due to the narrow bridge and sharp turns in the approaches. A new swing bridge was constructed in 1961, replacing this old bridge, and the approaches have been modified to eliminate the sharp turns. The local municipalities contributed to the latter work.

Rehabilitation of Bridges, Lachine Canal

An inspection of the bridges across the Lachine Canal has revealed that wear and corrosion have made it necessary to undertake major repairs, especially to the floor systems. At the same time it is considered an opportunity to make certain modifications to increase the capacities and improve the mechanical operation of the bridges. The program has become urgent in the case of the Charlevoix Street bridge due to damage sustained when a ship struck the bridge in the closing days of the 1961 navigation season. Temporary repairs were effected, permitting the passage of land vehicles, but the moving mechanism is out of service. The

replacement of the obsolete mechanism with machinery of modern design is scheduled for completion before the opening of the 1962 navigation season.

Other Engineering Studies

In addition to studies required in the initiation of the items of work above listed, studies have been made in 1961 on schemes for the improvement of navigation conditions at Bridge 15 of the Welland Canal, and on the possible modification of lock breast walls to provide more effective protection of gates from damage by upbound ships with overhanging bows.

Settlement of Outstanding Claims

As of January 1, 1961, 34 contractor's claims were outstanding, with 3 more being presented during the year. Of these 37 claims, 28 were settled in 1961, 17 being on the basis of awards recommended by the Seaway Claims Advisory Committee appointed by the Treasury Board. Five claims are still under study by this committee, offers of settlement on two claims are still awaiting acceptance by the contractor, one claim is the subject of litigation in the courts, and one claim has been refused outright.

OPERATION

Operation and Maintenance

The function of operating and maintaining all canals and ancillary equipment in the system is the responsibility of the Operation and Maintenance Branch. There are approximately 330 maintenance personnel embracing a variety of trades and some 600 operating personnel.

Seaway Rules and Regulations

Operating rules and regulations for ships using the Seaway are published jointly by the Seaway entities in the St. Lawrence Seaway Masters' Handbook. Copies may be obtained in Canada from the Queen's Printer, Ottawa, and in the United States from the Saint Lawrence Seaway Development Corporation, Massena, N.Y.

The Navigation Season

The navigation season on the St. Lawrence River canals normally extends from the middle of April to the end of November and on the Welland Canal from the first of April to the middle of December. During

this period Seaway structures are operated 24 hours a day, 7 days a week.

The spring break-up permitted opening of the St. Lawrence section on April 15, three days earlier than in 1960. However, for the first few days navigation was restricted to daylight passage while lighted aids were being placed and vessel traffic in all sections continued light during the opening phase. The Welland Canal opened for vessel movement on April 1, and the Canadian Sault Ste. Marie Canal on April 4, two days earlier than in 1960. Due to favourable weather conditions, the St. Lawrence section remained open for several days on a day to day basis after the previously announced closing date of November 30 to permit the upbound transit of inland vessels discharging grain cargoes downstream of the Seaway. The last downbound vessel cleared St. Lambert Lock December 2 and the last upbound vessel cleared Iroquois Lock December 7. In all, 21 upbound ships entered the system at St. Lambert after midnight, November 30. The Canadian Sault Canal closed to navigation December 12 and the Welland Canal December 15 with the last vessel clearing on December 16.



OPERATING STAFF STUDY PROCEDURE DURING THE WINTER SEASON

Training

During the non-navigation season, briefing schools were conducted at Cornwall Headquarters and on the Welland Canal, for despatchers, lockmasters and operators, at which the various phases of operation affecting each respective group were reviewed.

Vessel Inspections

An intensive inspection of mooring equipment was conducted during the non-navigation season on some 218 inland vessels at winter berths from below Montreal to Duluth and in April the inspection of inbound ocean vessels was resumed. A total of 289 first voyage vessel inspections was made as well as periodic repeat inspections during the year.

Vessel Movements

The 1961 season was again featured by a marked improvement in vessel movements and a more even flow of traffic. Ocean masters are rapidly becoming more familiar with canaling and pilots have attained

more proficiency in controlling the wide variety of ocean vessels transiting the Seaway with resultant greatly improved manoeuvring of these vessels.

To promote safety of navigation, to protect Seaway facilities and installations and to avoid congestion of vessels at locks a uniform speed limit for all vessels has been established. While this will not necessarily result in faster transits for each vessel, it will provide for efficient overall use of the system, thus permitting more ships to be passed in any given period. Under the present speeds and lockage times, the total average transit time from below St. Lambert Lock to Iroquois is approximately 17 hours and the average transit time through the Welland Canal is approximately $10\frac{3}{4}$ hours for upbound vessels, $11\frac{3}{4}$ hours for downbound vessels. These figures include time spent waiting turn but are exclusive of weather or equipment failure delays.

The number of recorded violations of Seaway regulations showed an increase over the previous year particularly with respect to Limit of Approach signs,

Stop signs and Bridge and Lock Signal Lights. Steps are being taken to deal with these.

The use of V.H.F. (Very High Frequency) radio-telephone communication has been strongly advocated since the opening of the Seaway and it has been decided due to the overloading of the M.F. (Medium Frequency) to make its use mandatory for vessel despatch transmissions commencing with the opening of navigation in 1962. The Authority will, however, continue to maintain a listening watch on the Medium Frequency.

Accidents and Delays

Delays to navigation resulted from a variety of reasons, the majority being the result of adverse weather conditions such as high winds and fog. A total of 657 hours, the equivalent of almost a full month's operation, was lost due to bad weather. Equipment failures accounted for a total of 125 hours delay, 94 hours of which were concentrated on the Welland Canal.

On the St. Lawrence section, 24 vessels were involved in accidents resulting in approximately 13 hours of delay and on the Welland there were a total of 38 vessel accidents resulting in 31 hours of delay. A breakdown of these statistics shows that on the Welland Canal less than 3 inland vessels per 1,000 passages were involved in accidents as compared with 11 ocean vessels per 1,000 passages. Although the ratio of ocean vessels to inland vessels involved in accidents is high, it is gratifying to note that the performance of the ocean vessels continues to improve as borne out by the fact that the number of ocean vessel accidents per 1,000 passages was 15 in 1960 and 34 in 1959.

Fencing and Landscaping

On the Welland Canal four-foot-high security fencing was erected along the west side of Locks 3, 5, and 7 for the protection of the public and guard railing and fencing were installed along the entrance roadway to the Beauharnois Locks for the same purpose. The reforestation program, started a few years ago on the Welland Canal, continued with the planting of 5,000 seedlings to give vessels additional protection from strong winds.

Second Welland Canal Cleanup

The cleanup of the old Second Welland Canal involved a restoration of lands in the municipalities of

St. Catharines, Merriton and Thorold, through which passed the canal channels constructed some 100 years ago. The project was started in 1958 and completed in 1960 at a total cost of approximately one and one-half million dollars.

Improvements

On the St. Lawrence section, the air-bubbler system at the stop logs and the air-jet systems at the lock gates were completed with the installation of a stationary compressor and permanent piping. This system proved to be most effective in facilitating the removal of stop logs in early spring. New valve motors were installed to improve hydraulic conditions and lessen surges in the locks; new mileage, whistle and limit of approach signs were erected in all districts; the connecting links of the balance chains were modified on the Victoria lift span and the by-pass bridge at St. Lambert Lock. At St. Lambert and Cote Ste. Catherine locks, the timber fendering on the approach walls was completed. Flashing warning lights for highway traffic were installed at Valleyfield and St. Louis bridges.

On the Welland Canal, the program of replacing the timber gate sills with steel members, which was begun in 1960, was continued in 1961 by the replacement of 10 additional sills; five new linesmen's shelters of concrete blocks were built in a continuation of the program to replace all of the old wooden shelters; the obsolete standby gasoline engines on four of the vertical lift bridges were replaced by new diesel engines; debris catchers were installed on the lower sheave guards of the lock gates; new counterweight cables were installed on Bridge 21, thus completing the replacement of cables on all vertical lift bridges; modifications were made to Locks 3 and 7 to improve the hydraulic conditions and an improved type of valve motor installed on several of the locks.

On the non-toll canals the new swing bridge over the Third Welland Canal at Port Dalhousie was completed; new gate machinery houses were built at the Sault Ste. Marie Canal; the Cardinal causeway on the Cornwall Canal was completed; on the Lachine Canal, Weir Bridge No. 3 was replaced by a fill with four culverts and the sidewalk on Bridge 7 was relocated to provide safer pedestrian facilities. Also on the Lachine Canal, plans were initiated to study the condition of all structures, as a result of which a major overhaul of Bridge 4 was planned along with some major improvements to various canal installations.

Maintenance

A complete program of preventive and corrective maintenance on all equipment, structures and machin-

ery was carried out, including regular lubrication of all machinery parts and wire ropes for bridges, gates, valves and fenders; regular monthly electrical load readings on all machinery and graphic records were made giving the load time curve for each piece of equipment. The lubrication charts were revised as required to conform with new methods and products and to standardize the use of lubricants on all districts. In addition to Seaway structures, certain municipal facilities such as sewers, pumping stations and water intakes under the Authority's jurisdiction were maintained.

During the year, defects were noted in the welds of the crown sheaves of the vertical lift bridges in the St. Lawrence section and a corrective maintenance program instituted. Extensive concrete repairs to lock walls, weirs, culverts and other structures were carried out, mainly on the Welland Canal. Also on the Welland, major repairs were made to the segmental and track girders of the bascule bridges and various bridge decks and other traffic surfaces were repaired or repaved. A continuous sweeping program for proving channel depths and minor dredging operations for removal of high spots were carried out by Authority forces and rip-rap stone was placed at various locations to prevent bank erosion.

The severe sleet storm in February caused considerable damage to overhead electrical transmission lines on the Eastern and Central districts. On the South Shore Canal alone, approximately a six mile stretch of power and lighting circuits was rebuilt by Seaway forces. Other electrical works included the installation of power supplies to gauging wells for the Canadian Hydrographic Service; the installation of a remote

control system for the lock power supply circuit breakers at Beauharnois, and an improved lock valve control system at St. Lambert. In addition considerable work was carried out to assist the Engineering Branch in the setting up and conducting of lock filling and emptying tests, particularly on the Welland.

During the winter season an extensive overhaul of the main diesel engine, including repairs to the auxiliary machinery such as pumps, generators, steering, heating system, etc., was carried out on the tug "Glenada". Improved collector trolley systems and positive elevation indicators were fabricated and installed at the Valleyfield and St. Louis bridges. At Côte Ste. Catherine Lock, one gate was jacked up and a modified gate pintle installed, and other repairs and replacements made where requisite.

On the Non-Toll Canals, spare lock gates were built for the Lachine, Cornwall and Sault Ste. Marie canals; the program of refacing the north lock wall at the Sault was continued; the hydraulic gate operating machinery at Lock 15, Cornwall Canal, was replaced by strut-type machinery; general repairs were made to concrete walls, gate sills and lock gates throughout. At the Lachine Canal, the electrical wiring at Lock 5 was partially renewed.

Hydraulics

Water level gauging and flow measurements were carried out throughout the year to control the flow of water through the canals, prevent flooding and maintain an adequate supply of water for navigation purposes, power generation, municipal water supplies and other leased water rights.

ADMINISTRATION

Cornwall Island

During the construction of the navigation channel on the south side of Cornwall Island, special arrangements had to be made to dispose of the glacial till dredged from the channel. The St. Regis Indian Band granted the Authority permission to use a low area on the north side of Cornwall Island for dumping purposes. One of the conditions under which this land was granted stipulated that the complete area must be restored for suitable agricultural purposes. A program

to rehabilitate some 200 acres was implemented during the year. It will extend over two years and will consist of ploughing, discing, seeding, fertilizing and weed control.

Cornwall-Massena International Bridge

Engineering progress reports indicate that the North Channel Span of the Cornwall-Massena International Bridge will be completed for traffic during the early summer of 1962. Plans are now being made to have

an official opening ceremony on or about July 3rd, 1962.

Teletype Circuit Installed

In order to expedite navigation on the Seaway and to facilitate the making of financial arrangements for transit, the Authority installed a teletype circuit which extends from St. Lambert to Port Colborne. The movement of vessels through all locks is reported to system Headquarters on a daily basis.

Disposal of Surplus Materials

During the past year a continuous program was underway in all offices of the Authority to dispose of materials and equipment that were surplus to its requirements. All disposals are made through Crown Assets Disposal Corporation and it is with great pleasure that we report having received excellent assistance and co-operation from Crown Assets Disposal Corporation officers in the disposal of surplus materials.

PERSONNEL

On April 11, 1961, agreement was reached with the Canadian Brotherhood of Railway, Transport and General Workers, for a three year contract covering Authority maintenance, operation and clerical employees, located at the Lachine, South Shore, Beauharnois, Cornwall, Iroquois, Welland and Sault Ste. Marie canals. Another agreement was reached with the same Union for office employees at Cornwall Headquarters. These two agreements covering 1,100 employees, became effective January 1, 1961, and will terminate December 31, 1963.

The Agreement, in addition to providing a 9% wage increase spread over the three years, achieved standardization of fringe benefits such as vacations, sick leave,

separation gratuities, statutory holidays and retirement rules, and equalization of the rates of compensation to maintenance employees within the three districts.

The agreement also provides for year-round employment on a five-day week basis for operational employees who formerly worked a six-day week during the navigation season.

A job evaluation program has been instituted with a view to bringing wages and salaries in line with duties and responsibilities.

The members of the Authority take pleasure in expressing their appreciation for the loyal and effective services rendered by the officers and employees of the Authority.

PUBLIC INFORMATION

The Authority provides a variety of information services—to users, to the press, Government departments and public bodies by means of releases and announcements and to specific inquirers, both public and private, in Canada and abroad.

In October, 1961, The St. Lawrence Seaway Authority and the Saint Lawrence Seaway Development Corporation of the United States participated in the International Exposition for Inland Navigation in

connection with the 27th Annual "Salon Nautique International" at Paris. Both entities provided personnel to staff the exhibit which was created by the Canadian Government Exhibition Commission, and the Seaway representatives took part in the international seminar on waterways held at the UNESCO Palace in Paris, October 1, 2 and 3.

The exhibit was visited by General Charles de Gaulle, President of the Republic of France, by the



ST. LAWRENCE SEAWAY DISPLAY ON VIEW IN FRANCE

Ambassadors of Canada and of the United States and by a few French and other Governmental officials.

The Seaway entities published a coloured, illustrated folder in English, French and German which was distributed to some 100,000 visitors to the Seaway exhibit and copies were widely distributed in Europe by offices of the Canadian and United States governments. Copies were distributed also in Canada and the United States and to various countries throughout the world, in addition to Europe.

Discussions concerning the facilities and use of the St. Lawrence Seaway were held with shipping officials in a number of countries, and Authority representatives reported upon their findings with regard to European installations, craft and techniques.

Authority officials maintain close association with

various organized groups in Canada and the United States concerned with shipping, traffic, engineering and other matters relating to the Seaway and take part in conventions and other meetings where developments in these fields are being discussed.

The St. Lawrence Seaway Authority extended co-operation to a number of official groups, including the Permanent International Association of Navigation Congresses, for organization and conduct of tours of Seaway installations at various times during the year.

The St. Lawrence Seaway Masters' Handbook is published by the two Seaway entities to provide ship masters and other interested persons with information and the regulations applicable to transit of the Seaway.*

* Available from the Queen's Printer—Cat. No. TS 2-162

FINANCIAL SECTION

Finance

The Authority's Balance Sheet as at December 31, 1961, and Statement of Income and Expenditure for the year ended on that date, as reported upon by the Auditor General, is appended to this report.

A statement of sources of funds and their utilization for the year 1961 and for the period from the commencement of Seaway construction to 31st December 1961 follows:

(in millions of \$)

	Year 1961	Cumulative 1st August 1954 to 31st Dec. 1961
Source of Funds		
Loans and other indebtedness		
Loans under Sec. 25 of the Act . . .	\$22.5	\$328.0
Interest deferred (P.C. 1961-1863) . .	14.3	33.7
	36.8	361.7
Proceeds from disposal of fixed assets . .	.4	.4
Provision for replacement of movable assets . . . . .	.2	.9
Balance of net current liabilities at 31:12:61	—	.4
	\$37.4	\$363.4
Utilization of Funds		
Fixed assets—gross additions		
Cost of construction or acquisition . .	\$16.3	\$323.4
Interest during construction . . . . .	.5	17.3
	16.8	340.7
Investment—Cornwall International Bridge Co. Ltd.	—	.2
Net loss	10.3	22.5
Decrease in net current liabilities during 1961 (including payment of \$9.7 mil- lion balance of interest accrued in 1960)	10.3	—
	\$37.4	\$363.4

Borrowings

Until amendment of the St. Lawrence Seaway Authority Act on 28th February, 1962, borrowings by the Authority were limited to \$335 million of which \$328 million had been drawn up to the end of 1961. With the amendment of 28th February, 1962, the limit of borrowings has been increased to \$345 million. It

is anticipated that the increase so authorized will in large part be utilized during 1962 and 1963 for the completion of construction.

Deferment of Interest Payments

Under the terms of the Authority's former financial arrangements, payment of interest on loans was required during the first three full years of operation (through the year ending 31st December 1962). Thereafter, for the forty-seven year period ending 31st December 2009, payment was required of annual amounts sufficient to amortize all loans and interest thereon.

In December 1961, by P.C. 1961-1863, the terms of the Authority's financing arrangements were amended to the effect that the principal amount of loans received under Section 25 of the Act together with interest previously deferred and all other interest now accrued or accruing up to December 1963 is to be repaid, together with current interest thereon, in forty-six equal annual instalments during the years 1964-2009 inclusive. Pursuant to this Order-in-Council payment of interest accrued during 1961 has been deferred.

Capital Expenditures

Expenditures of \$16.3 million for acquisition or construction of fixed assets during 1961, which included \$7.2 million paid in settlement of claims, may be summarized as follows:

(in millions of \$)

Land	\$.5
Channels, canals and locks	8.9
Cornwall North Channel Bridge	3.3
Other bridges . . . . .	.9
Movable equipment . . . . .	.3
Municipal remedial works . . . . .	.2
Works under construction	2.2
	\$ 16.3

Revenues

The Authority assesses and collects toll revenues accruing to the Saint Lawrence Seaway Development

Corporation as well as to itself. Compared with 1960, total toll revenues for 1961 were:

	1961		1960	
	Canada	U.S.	Canada	U.S.
	(in millions of \$)			
St. Lawrence River Section (Montreal to Lake Ontario)	\$8.1	\$3.3	\$7.2	\$2.9
Welland Canal	1.4	—	1.3	—
	\$9.5	\$3.3	\$8.5	\$2.9

At \$9.5 million (1960—\$8.5 million) 1961 toll revenues accruing to the Authority increased by \$1 million. Since there was no change in the toll structure, the increase in tolls revenue is due entirely to the increased tonnages transiting the Seaway:

	1961			1960		
	Cargo Tons	Toll Revenue	¢ Per Ton	Cargo Tons	Toll Revenue	¢ Per Ton
	(in millions)			(in millions)		
St. Lawrence River Section	23.4	\$8.1	34.6	20.3	\$7.2	35.5
Welland Section	31.5	1.4	4.4	29.2	1.3	4.4
	54.9	\$9.5	17.3	49.5	\$8.5	17.2

Income and Expense

The 1961 results for the St. Lawrence River Section and the Welland Canal compare with 1960 as follows:

	St. Lawrence River (Montreal to Lake Ontario)		Welland Canal	
	1961	1960	1961	1960
	(in millions of \$)			
Income—Tolls	\$8.1	\$7.2	\$1.4	\$1.3
—Miscellaneous . . . . .	.1	.1	.8	.8
	8.2	7.3	2.2	2.1
Expenses	2.3	2.1	4.4	3.8
Net operating income	5.9	5.4	2.2—	1.7—
Interest	12.5	11.5	1.3	1.3
Net (cash) deficit before provision for renewal of movable assets . .	\$6.6—	\$6.1—	\$3.5—	\$3.0—

AUDITOR GENERAL OF CANADA

Ottawa, March 30, 1962.

THE HONOURABLE LEON BALCER,
MINISTER OF TRANSPORT,
OTTAWA.

Sir,

The accounts and financial statements of The St. Lawrence Seaway Authority have been examined for the year ended December 31, 1961.

Section 25 of the St. Lawrence Seaway Authority Act provides that the Minister of Finance, with the approval of the Governor in Council, may from time to time make loans to the Authority. Section 13 of the Act, as amended, states that the aggregate of the amounts so borrowed under the Act and outstanding shall not at any time exceed \$345,000,000.

The accompanying balance sheet shows that the Authority was indebted to the Government of Canada on December 31, 1961 in respect of loans and de-

ferred interest in the total amount of \$361,716,057, made up as follows:

Loans under section 25 of the Act	\$328,000,000
Interest to December 31, 1959—deferred	19,427,117
Interest for the year 1961—deferred	14,288,940
	361,716,057

Under the provision of section 16 of the St. Lawrence Seaway Authority Act, tolls are to provide a revenue sufficient to defray the cost to the Authority of its operations, which costs, in addition to those of operating and maintaining the canals and works, are defined under subsection (a) and (b) of section 16 as being payments in respect of the interest on amounts borrowed by the Authority and amounts sufficient to amortize the principal of amounts so borrowed over a period not exceeding fifty years. Pursuant to these provisions, the original conditions under which loans were made to the Authority under section 25 of the Act required the payment of interest only in the first

three full years of operation (through the year ending December 31, 1962) and thereafter payment of annual amounts sufficient to amortize over a period of forty-seven years (or by December 31, 2009) all loans and interest thereon.

As pointed out in Balance Sheet Note number (5) the terms of the Authority's financing arrangements were amended during the year and now call for repayment of all loans together with interest previously deferred and all other interest now accrued or accruing up to December 31, 1963, together with current interest thereon, in forty-six equal annual instalments commencing December 31, 1964.

In accordance with these financial arrangements the year's operations have been charged with interest amounting to \$13,792,739 (an additional amount of \$496,201 was included in construction costs), but this interest has not been paid and is included in the balance sheet as part of the Proprietary Equity of the Government of Canada. There was no charge to the year's operations with respect to amortization of the principal of the amounts borrowed.

The costs of operating and maintaining the canals and works under the administration of the Authority are defined under subsection (c) of section 16 as including all operating costs of the Authority and such reserves as may be approved by the Minister. The Authority is of the opinion that it is not necessary to include depreciation as an element of operating and maintenance cost and that the amortization over the fifty year period of the principal of the amounts borrowed together with interest as required by subsections (a) and (b) meets the requirements of the Act. Accordingly, no provision for depreciation has been included in the costs for the year under review. An amount of \$200,565 was provided during the year under review toward the cost of replacement of movable equipment having an estimated lifetime of less

than fifty years. No provision has been made for the replacement of movable equipment which has an estimated useful life of more than fifty years, or for lock and bridge operating equipment regardless of its life expectancy. Since replacement of worn-out assets is an operating cost, we believe that the financial plans of the Authority should include provision for all such replacements, whether required within or beyond the period of fifty years provided by the Act for retirement of its indebtedness.

In compliance with the requirements of section 87 of the Financial Administration Act, I now report that, in my opinion, subject to the above observations:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statements of the Authority
 - (i) were prepared on a basis consistent with that of the preceding year, and are in agreement with the books of account,
 - (ii) in the case of the balance sheet, give a true and fair view of the state of the Authority's affairs as at the end of the financial year, and
 - (iii) in the case of the statement of income and expense, give a true and fair view of the income and expense of the Authority for the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

A. M. HENDERSON,
Auditor General of Canada.

THE ST. LAWRENCE SEAWAY AUTHORITY

Balance Sheet as at December 31, 1961

(Established by the *St. Lawrence Seaway Authority Act*)

(with comparative figures as at December 31, 1960)

ASSETS		1961	1960	LIABILITIES		1961	1960
Current Assets:				Current Liabilities:			
Cash		\$ 863,620	\$ 603,771	Accounts payable		\$ 2,022,432	\$ 3,282,804
Accounts receivable (less provision for doubtful accounts)		499,289	1,058,016	Due to Saint Lawrence Seaway Development Corporation re tolls		37,941	38,580
Due from Government of Canada re non-toll canals		311,884	620,392	Contractors' holdbacks		837,214	881,536
Inventories of materials, minor equipment, and shop work in progress, at cost		855,941	846,808	Interest payable on capital debt (1961 interest was deferred)		—	9,648,583
Total Current Assets		2,530,734	3,128,987	Total Current Liabilities		2,897,587	13,851,503
Bonds and Cash held as Contractors' Security Deposits and Toll Guarantees (contra)		897,586	911,759	Contractors' Security Deposits and Toll Guarantees (contra)		897,586	911,759
Investment in Shares of Cornwall International Bridge Company Limited		200,000	200,000	Reserve for Replacement of Movable Equipment		719,440	596,474
Capital Assets, at cost:				Proprietary Equity of the Government of Canada: Capital Assets entrusted, as at April 1, 1959, to the Authority by the Governor in Council under section 14 of the Act			
Land	\$ 9,956,108		9,483,434	Welland Ship Canal	\$130,727,112		130,703,844
Buildings	6,526,171		6,985,813	Non-toll canals and other properties at Lachine, Cornwall, Sault Ste. Marie and Niagara Peninsula	49,784,050		51,111,823
Municipal remedial works	8,401,675		8,207,545			180,511,162	181,815,667
Channels, canals, and locks	374,009,226		364,337,312			328,000,000	305,500,000
Cornwall North Channel Bridge (including land)	7,029,079		3,424,336			33,716,057	19,427,117
Other bridges, including alterations to existing structures	58,624,830		57,753,236	Loans under section 25 of the Act			
Movable equipment—including shore, floating, shop and other equipment	3,121,117		3,462,445	Interest on loans—payment deferred		542,227,219	506,742,784
Works under construction	3,208,343		920,813				
	470,876,549		454,572,934	Deduct:			
Non-toll canals and other properties at Lachine, Cornwall, Sault Ste. Marie and Niagara Peninsula	49,784,050		51,111,823	Deficit:			
		520,660,599	505,684,757	Balance as at January 1	12,177,017		
		524,288,919	509,925,503	Net loss for the year, per Statement of Income and Expense	10,275,896		
				Balance as at December 31	22,452,913		
						519,774,306	494,565,767
						524,288,919	509,925,503

The appended notes form an integral part of this statement.

Certified correct:

Approved:

J. M. MARTIN
Director of Finance and Accounting

R. J. RANKIN
President

The above Balance Sheet and the related Statement of Income and Expense have been examined and reported upon under date of March 30, 1962, to the Minister of Transport, as required by section 87 of the Financial Administration Act.

A. M. HENDERSON
Auditor General of Canada

THE ST. LAWRENCE SEAWAY AUTHORITY

Notes to Balance Sheet

1. Outstanding commitments under uncompleted contracts as at December 31, 1961 amounted to approximately \$3,700,000.
2. Claims for additional compensation amounting to approximately \$7,600,000, received from contractors in respect of certain completed contracts, remained unsettled at December 31, 1961. The Authority has, with the approval of Treasury Board, made offers of settlement amounting to \$1,100,000.
3. The liability of the Authority with respect to compensation for properties under expropriation at December 31, 1961 is estimated by the Authority as amounting to \$1,200,000.
4. Negotiations with the Canadian National Railways with respect to responsibility for the cost of track diversion and rearrangement of the approaches to the Victoria Jubilee Bridge were continued during the year. The cost of this work to the Railways, including interest and other charges, is estimated by the Railways at \$13,500,000. The Authority disclaims responsibility for these costs.

In the event that the parties fail to agree on a settlement, the matter will be referred to the Governor in Council as provided for in the agreement of January 12, 1956 between the Railways and the Authority.

5. The terms of the Authority's financing arrangements were amended by Order in Council P.C. 1961-1863 of December 29, 1961, and the principal amount of loans received under Section 25 of the St. Lawrence Seaway Authority Act to finance construction of the Seaway, together with interest previously deferred and all other interest now accrued or accruing up to December 31, 1963, is now to be repaid, together with current interest thereon, in forty-six equal annual instalments commencing December 31, 1964.
6. The Reserve for Replacement of Movable Equipment amounting to \$719,440 at December 31, 1961 represents the accumulated provision for replacement of certain equipment having an estimated useful life of less than fifty years. No provision has been made for the cost of replacing movable equipment which has an estimated useful life of more than fifty years or for lock and bridge operating equipment regardless of its life expectancy.

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Income and Expense for the year ended December 31, 1961

(with comparative figures for the year ended
December 31, 1960)

	1961	1960
Income		
Tolls assessed	\$9,548,303	\$8,482,746
Rentals	593,699	498,293
Wharfage	150,550	177,405
Miscellaneous	154,704	202,198
	<u>\$10,447,256</u>	<u>9,360,642</u>
Expense (Schedule "A")		
Operating expense	2,602,597	2,321,417
Maintenance expense	1,727,616	1,687,817
Operating and maintenance supervision	1,071,183	863,848
Administrative expense	1,616,737	1,323,950
	<u>7,018,133</u>	<u>6,197,032</u>
Deduct: Portion of supervision and administrative expense applicable to non-toll canals	288,285	288,089
	<u>6,729,848</u>	<u>5,908,943</u>
Net operating income before providing for interest and for replacement of movable equipment	3,717,408	3,451,699
Interest on loans from the Government of Canada (not including \$496,201 added to construction costs)	13,792,739	12,791,197
Provision for replacement of movable equipment	200,565	92,190
	<u>13,993,304</u>	<u>12,883,387</u>
Net loss for the year	<u>10,275,896</u>	<u>9,431,688</u>

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Expense for the year ended December 31, 1961

(with comparative figures for the year ended
December 31, 1960)

	1961	1960
Operating expense:		
Channels, canals and locks	\$1,684,172	\$1,350,208
Bridges	511,040	517,430
Grants in lieu of municipal taxes	353,142	410,897
Miscellaneous	54,243	42,882
	<u>\$2,602,597</u>	<u>2,321,417</u>
Maintenance expense:		
Channels, canals and locks	768,373	831,408
Bridges and tunnel	527,088	472,990
Canal lands and roads	140,103	114,860
Dredging and aids to navigation	99,476	149,517
Power transmission lines and canal lighting	85,669	50,495
Minor equipment	58,267	37,878
Miscellaneous	48,640	30,669
	<u>1,727,616</u>	<u>1,687,817</u>
Operating and maintenance supervision:		
Salaries	899,631	660,847
Engineering services	45,451	97,880
Office expenses	37,538	42,443
Travel	31,053	23,671
Miscellaneous	57,510	39,007
	<u>1,071,183</u>	<u>863,848</u>
Administrative expense:		
Salaries of members and executive officers	105,657	109,105
Other salaries	719,210	570,573
Employee benefits	503,956	383,073
Office accommodation	69,177	69,075
Public liability and property damage claims	40,109	—
Communications	38,702	21,044
Printing, stationery and office supplies	37,836	22,249
Travel and removal	31,429	38,808
Grants in lieu of municipal taxes	25,234	49,188
Provision for doubtful accounts	—	30,000
Rental of office machines	22,344	14,860
Miscellaneous	23,083	15,975
	<u>1,616,737</u>	<u>1,323,950</u>
Total expense	<u>7,018,133</u>	<u>6,197,032</u>

THE ST. LAWRENCE SEAWAY AUTHORITY

NON-TOLL CANALS

Statement of Expense, Income, Expenditures on Remedial Works, and Capital Expenditures for the year ended December 31, 1961

(with comparative figures for the year ended
December 31, 1960)

	1961	1960		1961	1960
Expense			Income		
Operating expense:			Rentals	310,904	268,409
Channels, canals and locks \$ 345,242	\$ 315,399		Wharfage	87,521	111,593
Bridges	110,001	101,755	Refunds of previous years' ex-		
Grants in lieu of municipal			penditures	110,655	25,536
taxes	128,399	231,043	Miscellaneous	6,638	35,855
	\$ 583,642	648,197		515,718	441,393
Maintenance expense:			Operating deficit	1,420,605	1,264,430
Channels, canals, and locks 426,819	136,887		Remedial works—Municipal prop-		
Canal lands and roads . . .	77,635	58,094	erties	72,128	996,754
Bridges	72,817	92,491	Capital expenditures:		
Equipment	35,302	—	Construction of works . . .	307,991	245,602
Power transmission lines and			Acquisition of equipment . .	10,192	21,269
canal lighting	20,659	7,088		318,183	266,871
Wharves and docks	15,141	13,681	Operating deficit, expenditures on		
Miscellaneous	101,198	51,133	remedial works and capital ex-		
	749,571	359,374	penditures recovered or recover-		
Operating and maintenance			able from parliamentary appro-		
supervision	203,851	223,760	priations	1,810,916	2,528,055
Portion of supervision and ad-			Recovered from:		
ministrative expense applica-			Department of Transport 1960–		
ble to non-toll canals . . .	288,285	288,089	61 appropriations, Votes 406,		
Employee benefits	110,974	101,054	557 and 645	286,491	
Expenditures on uncompleted			Department of Transport 1961–		
work orders and unabsorbed			62 appropriations, Votes 452		
overhead	—	85,349	and 594	1,212,541	1,499,032
	1,936,323	1,705,823	Balance to be recovered from De-		
			partment of Transport . . .	311,884	
				1,810,916	

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

CANAUX NON SOUMIS AU PÉAGE

États des dépenses, des recettes, des dépenses pour immobilisations pour l'année terminée le 31 décembre 1961

(avec chiffres comparatifs pour l'année terminée le 31 décembre 1960)

		1961	1960
Dépenses			
Frais d'exploitation:			
Canaux, canaux et écluses	\$ 345,242	\$ 315,399	
Ponts	110,001	101,755	
Subventions tenant lieu de taxes municipales	128,399	231,043	
Frais d'entretien:			
Canaux, canaux et écluses	426,819	136,887	
Terrains et routes de canal	77,635	58,094	
Ponts	72,817	92,491	
Matériel	35,302	—	
Lignes de transmission d'énergie et éclairage des canaux	20,659	7,088	
Quais et bassins	15,141	13,681	
Divers	101,198	51,133	
Surveillance de l'exploitation et de l'entretien	203,851	223,760	
Partie des frais de surveillance et d'administration afférente aux canaux non soumis au péage	288,285	288,089	
Prestations aux employés	110,974	101,054	
Dépenses relatives à des commandes de travaux non terminés et frais généraux non absorbés	—	85,349	
	1,936,323	1,705,823	
Recettes			
Loyers	310,904	87,521	
Quayage	110,655	25,536	
Remboursements des dépenses des années précédentes	6,638	35,855	
Déficit d'exploitation	515,718	441,993	
	1,420,605	1,264,430	
Ouvrages de protection—Propriétés municipales	72,128	996,754	
Immobilisations:			
Construction d'ouvrages	307,991	245,602	
Acquisition de matériel	10,192	21,269	
Déficit d'exploitation, dépenses récupérées ou récupérables sur les crédits du Parlement	1,810,916	2,528,055	
Récupéré sur:			
Crédits du ministère des Transports pour 1960-1961—nos 406,557 et 645	286,491		
Crédits du ministère des Transports pour 1961-1962—nos 452 et 594	1,212,541		
Solde à récupérer du ministère des Transports	311,884		
	1,810,916		

L'Administration de la Voie maritime du Saint-Laurent

Etat des dépenses pour l'année terminée le
31 décembre 1961

(avec chiffres comparatifs pour l'année terminée le
31 décembre 1960)

	1961	1960
Frais d'exploitation	\$1,684,172	\$1,350,208
Canaux, canaux et écluses	511,040	517,430
Ponts		
Subventions tenant lieu de taxes	353,142	410,897
Municipales	54,243	42,882
Divers		
Frais d'entretien:		
Canaux, canaux et écluses	768,373	831,408
Ponts et tunnel	527,088	472,990
Terrains et routes de canal	140,103	114,860
Dragage et aides à la navigation	99,476	149,517
Lignes de transmission d'énergie		
et éclairage des canaux	85,669	50,498
Matériel secondaire	48,640	37,875
Divers		
Surveillance de l'exploitation et de		
l'entretien:		
Traitements	899,631	660,847
Services techniques	47,451	97,880
Frais de bureau	37,538	42,443
Frais de voyage	31,053	23,671
Divers	57,510	39,007
Frais d'administration:		
Traitements des membres et du	105,657	109,105
personnel de direction	719,210	570,573
Autres traitements	503,956	383,073
Bureaux	69,177	69,075
Réclamations—responsabilité		
vis-à-vis du public et domma-	40,109	
ges à la propriété		
Communications	38,702	21,044
Frais de voyage et de déménagement	37,836	22,249
Subventions tenant lieu de taxes	31,429	38,808
Municipales	25,234	49,188
Provision pour créances douteuses	22,344	30,000
Location de machines de bureau	23,083	14,860
Divers		15,975
Total des dépenses	7,018,133	6,197,032

L'Administration de la Voie maritime du Saint-Laurent

Etat des recettes et des dépenses pour l'année
terminée le 31 décembre 1961

(avec chiffres comparatifs pour l'année terminée le
31 décembre 1960)

	1961	1960
Recettes:		
Péages	\$9,548,303	\$8,482,746
Loyers	593,699	498,293
Quayage	150,550	177,405
Divers	154,704	202,198
Dépenses (Annexe "A")		
Frais d'exploitation	2,602,597	2,321,417
Frais d'entretien	1,727,616	1,687,817
Surveillance de l'exploitation et	1,071,183	863,848
de l'entretien	1,616,737	1,323,950
Frais d'administration	7,018,133	6,197,032
Déduire: Partie des frais de sur-		
veillance et d'adminis-	288,285	288,089
tration affectée aux		
canaux non soumis au		
péage		
Intérêts sur prêts de l'Etat (à		
l'exclusion de la somme de	13,792,739	12,791,197
\$496,201 ajoutée aux frais de		
construction)		
Provision pour le remplacement	200,565	92,190
du matériel non durable		
Perte nette pour l'année	10,275,896	9,431,688

Remarques annexées au bilan

1. Les engagements en suspens relatifs à des contrats dont les travaux n'étaient pas terminés au 31 décembre 1961 s'élevaient à environ \$3,700,000.
2. Certaines demandes de réclamations supplémentaires sélectionnées à l'exécution de certains contrats, n'étaient pas encore fait l'objet d'un règlement au 31 décembre 1961. L'Administration a, avec l'approbation du Conseil du Trésor, fait des offres de règlement au montant de \$1,100,000.
3. L'Administration estime à \$1,200,000 la valeur de ses engagements relatifs aux réclamations pour des propriétés faisant l'objet d'expropriation au 31 décembre 1961.
4. Les pourparlers avec les chemins de fer Nationaux du Canada au sujet de la responsabilité pour le coût de la déviation des voies ferrées et de la disposition des approches au pont Victoria Jubilee se sont poursuivis pendant l'année. Les chemins de fer évaluent à \$13,500,000 le coût de ces travaux, intérêts et autres frais compris. L'Administration dénie toute responsabilité à l'égard de cette somme. Dans le cas où les parties ne parviendraient pas à s'entendre
5. Les termes des arrangements financiers de l'Administration ont été modifiés par le décret C.P. 1961-1863 du 29 décembre 1961. Le montant principal des prêts consentis en vertu de l'article 25 de la Loi sur l'Administration de la voie maritime du Saint-Laurent pour le financement de la construction de la voie maritime, plus les intérêts précédemment différés et tous les autres intérêts actuellement courus ou à échoir au 31 décembre 1963, devra être remboursés, avec les intérêts courants, en quarante-six versements annuels égaux, à compter du 31 décembre 1964.
6. La réserve pour le remplacement du matériel non durable, qui était de \$719,440 au 31 décembre 1961, représente la provision accumulée pour le remplacement d'un certain matériel dont la durée utile est estimée à moins de cinquante ans. Il n'y a aucune provision pour le coût du remplacement du matériel non durable dont la durée utile est estimée à plus de cinquante ans, ou pour le matériel d'exploitation des écluses et des ponts quelle qu'en soit la durée prévue.

au sujet d'un règlement, l'affaire sera renvoyée au Gouvernement en conseil comme il est prévu dans l'entente du 12 janvier 1956 intervenue entre les chemins de fer Nationaux et l'Administration.

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

(Établie par la Loi sur l'Administration de la voie maritime du Saint-Laurent)

BILAN AU 31 DÉCEMBRE 1961

(avec chiffres comparatifs au 31 décembre 1960)

	ACTIF		PASSIF	
	1961	1960	1961	1960
Actif disponible:				
Encaisse	\$ 863,620	\$ 603,771	\$ 2,022,432	\$ 3,282,804
Comptes débiteurs (moins provision pour créances douteuses)	499,289	1,058,016	37,941	38,580
Dette du Gouvernement du Canada—canaux non soumis au péage	311,884	620,392	837,214	881,536
Inventaires des matériaux, du matériel secondaire et des travaux d'atelier en cours d'exécution—au prix coûtant	855,941	846,808	—	9,648,583
Total de l'actif disponible	2,530,734	3,128,987	2,897,587	13,851,503
Cautionnements et espèces détenus à titre de dépôts de garantie et de garanties de péage (contre-partie)	897,586	911,759	897,586	911,759
Placements dans des actions de la Cornwall International Bridge Company Limited	200,000	200,000	719,440	596,474
Immobilisations, au prix coûtant:				
Terrain	\$ 9,956,108	9,483,434		
Bâtiments	6,526,171	6,983,813		
Travaux municipaux de protection	8,401,675	8,207,545	\$130,727,112	130,703,844
Canaux, canaux et écluses	374,009,226	364,337,312		
Pont de Cornwall—canal nord (y compris les terrains)	7,029,079	3,424,336	49,784,050	51,111,823
Autres ponts, y compris modifications	58,624,830	57,753,236		
Matériel non durable, y compris matériel riverain, flottant, d'atelier et autre	3,121,117	3,462,445	180,511,162	181,815,667
Travaux en cours	3,208,343	920,815	328,000,000	305,500,000
			33,716,057	19,427,117
	470,876,549	454,572,934	542,227,219	506,742,784
Canaux non soumis au péage et autres biens—				
Lachine, Cornwall, Saute-Sainte-Marie et pénin-	49,784,050	51,111,823		
sule de Niagara				
	520,660,599	505,684,757	12,177,017	12,177,017
	524,288,919	509,925,503	10,275,896	494,565,767
			22,452,913	509,925,503
			519,774,306	519,774,306
			524,288,919	509,925,503

Les remarques annexées font partie intégrante du présent état.

Certifié exact:

Le Directeur des finances et de la comptabilité,
J. M. MARTIN

Approuvé:

Le Président,
R. J. RANKIN

Le bilan ci-dessus ainsi que l'état des recettes et des dépenses s'y rapportant ont été examinés et ont fait l'objet d'un rapport qui a été présenté le 30 mars 1962 au ministre des Transports, en conformité de l'article 87 de la Loi sur l'Administration financière.

L'Auditeur général du Canada,
A. M. HENDERSON

l'Administration devait au gouvernement du Canada, du fait de ses emprunts et des intérêts différés sur ces emprunts, une somme totale de \$361,716,057 se répar-

tissant ainsi:

Emprunts contractés en vertu de l'article 25 de la Loi	
Intérêts au 31 décembre 1959—différés	\$ 328,000,000
Intérêts pour l'année 1961—différés	19,427,117
	14,288,940
	\$ 361,716,057

En vertu de l'article 16 de la Loi sur l'Administration de la voie maritime du Saint-Laurent, les péages sont destinés à assurer un revenu suffisant pour couvrir les frais d'opération de l'Administration, lesquels, outre les frais d'exploitation et d'entretien des canaux et ouvrages, comprennent, comme il en est fait mention aux alinéas a) et b) de l'article 16, des versements à l'égard des intérêts sur les sommes empruntées par l'Administration et des versements suffisants pour amortir le principal des sommes empruntées pendant une période d'au plus cinquante ans. Aux termes de ces dispositions, les conditions initiales selon lesquelles des prêts étaient consentis à l'Administration en vertu de l'article 25 de la Loi, ne requièrent le paiement des intérêts que pendant les trois premières années complètes d'exploitation (soit jusqu'au 31 décembre 1962); par la suite, il devra être payé des montants annuels suffisants pour amortir en quarante-sept ans (c'est-à-dire au cours d'une période se terminant le 31 décembre 2009) tous les emprunts et intérêts sur ces emprunts.

Comme il est signalé à la remarque n° 5 du bilan, les termes des arrangements financiers de l'Administration ont été modifiés pendant l'année. Ils exigent maintenant le remboursement de tous les emprunts, plus les intérêts précédemment différés, tous les autres intérêts qui s'accumulent et qui s'accumuleront jusqu'au 31 décembre 1963, ainsi que les intérêts chargés sur ces intérêts, en quarante-six versements annuels égaux, à compter du 31 décembre 1964.

Conformément à ces arrangements financiers, les intérêts sur les opérations de l'année s'élèvent à \$13,792,739 (un montant supplémentaire de \$496,201 est compris dans les frais de construction), mais ces intérêts n'ont pas été payés et ont été portés au bilan sous Part de propriétaire du gouvernement du Canada. Rien n'a été porté aux opérations de l'année à l'égard de l'amortissement du principal des sommes empruntées. Les frais d'exploitation et d'entretien des canaux et des ouvrages relevant de l'Administration sont définis,

en vertu de l'alinéa c) de l'article 16, comme incluant tous les frais d'opération de l'Administration ainsi que les réserves qui peuvent être approuvées par le Ministre. L'Administration est d'avis qu'il n'est pas nécessaire d'inclure la dépréciation dans les frais d'exploitation et d'entretien et que l'amortissement au cours d'une période de cinquante ans du principal des emprunts ainsi que des intérêts, comme l'exigent les alinéas a) et b), satisfait aux exigences de la Loi. Les frais afférents à l'année courante ne comprennent donc aucune provision pour la dépréciation. Une somme de \$200,565 a été affectée, au cours de la présente année, au remplacement du matériel non durable dont l'usage est estimé à moins de cinquante ans. Il n'y a aucune provision pour le remplacement du matériel non durable dont la durée utile est estimée à plus de cinquante ans, ni du matériel d'exploitation des écluses et des ponts quelle qu'en soit la durée prévue. Comme le remplacement du matériel usé est une dépense d'exploitation, nous croyons que les prévisions financières de l'Administration devraient comprendre une provision pour tous ces remplacements, qu'ils soient nécessaires de les effectuer en deçà ou au delà de la période de cinquante ans prévue par la Loi pour le remboursement des dettes de l'Administration.

En conformité des prescriptions de l'article 87 de la Loi sur l'Administration financière et sous réserve des observations qui précèdent, je déclare qu'à mon avis

- a) l'Administration a tenu des livres de comptabilité appropriés;
- b) les états financiers de l'Administration (i) ont été préparés sur une base comparable à celle de l'année précédente et concordent avec les livres de comptabilité;
- (ii) dans le cas du bilan, donnent un exposé juste et fidèle de l'état des affaires de l'Administration à la fin de l'année financière; et
- (iii) dans le cas de l'état des recettes et des dépenses, donnent un exposé juste et fidèle des recettes et des dépenses de l'Administration pour l'année financière; et
- c) les opérations de l'Administration venues à ma connaissance étaient de la compétence de l'Administration aux termes de la Loi sur l'administration financière et de toute autre loi applicable à l'Administration.

L'auditeur général,
A. M. HENDERSON

le règlement de réclamations, peut être résumée de la façon suivante:

(En millions de dollars)	
Terrain	\$.5
Canaux, canaux et écluses	8.9
Pont du chenal nord de Cornwall	3.3
Autres ponts	.9
Matériel non durable	.3
Travaux municipaux de protection	.2
Ouvrages en voie de construction	2.2
	\$ 16.3

Recettes

L'Administration impose et perçoit des péages dont une partie va à la Saint Lawrence Seaway Development Corporation et dont l'autre partie lui revient. Le tableau suivant indique le total des péages perçus en 1961 par comparaison à ceux de 1960:

	1961	1960
Canada	Unis	Unis
Canada	Unis	Unis
Etats-Unis	Unis	Unis

(En millions de dollars)

Section du fleuve Saint-Laurent (de Montréal au lac Ontario)	\$8.1	\$3.3	\$7.2	\$2.9
Canal de Welland	1.4	—	1.3	—
	\$9.5	\$3.3	\$8.5	\$2.9

Le montant des péages qui est revenu à l'Administration a été de 9.5 millions en 1961 (8.5 millions en 1960), soit une augmentation de 1 million. Comme il

AUDITEUR GÉNÉRAL DU CANADA

Ottawa, le 30 mars 1962

L'HONORABLE LÉON BALCER
Ministre des Transports
Ottawa
Monsieur,

Les comptes et les états financiers de l'Administration de la voie maritime du Saint-Laurent pour l'année terminée le 31 décembre 1961 ont été examinés.

n'y a pas eu de changement dans la structure tarifaire, l'augmentation des péages est due entièrement à l'accroissement du trafic dans la voie maritime:

(En millions)		(En millions)	
Cargaison	Péages en tonnes	Cargaison	Péages en tonnes
1961	1960	1961	1960
Section du fleuve Saint-Laurent	\$8.1	34.6	20.3
Section de Welland	31.5	1.4	29.2
	\$9.5	17.3	49.5
	\$4.9		\$8.5
			17.2

Recettes et dépenses

Le tableau suivant indique les résultats de 1961 pour la section du fleuve Saint-Laurent et pour le canal de Welland par comparaison à ceux de 1960:

(En millions de dollars)		(En millions de dollars)	
Recettes	Péages	Recettes	Péages
1961	1960	1961	1960
Section du fleuve Saint-Laurent (de Montréal au lac Ontario)	\$8.1	34.6	20.3
Section de Welland	31.5	1.4	29.2
	\$9.5	17.3	49.5
	\$4.9		\$8.5
			17.2

Dépenses

Revenu net d'exploitation

Intérêts

Déficit net (comptant) avant provision pour le remplacement du matériel non durable

En vertu de l'article 25 de la Loi sur l'Administration de la voie maritime du Saint-Laurent, le ministre des Finances, avec l'approbation du gouverneur en conseil, peut de temps à autre consentir des prêts à l'Administration. L'article 13 de la Loi, dans sa forme modifiée, stipule que l'ensemble des montants ainsi empruntés, en vertu de la Loi et non encore remboursés ne doit jamais dépasser 345 millions de dollars.

Le bilan ci-joint indique qu'au 31 décembre 1961,

SECTION FINANCIÈRE

Finances

En annexe au présent rapport se trouvent le bilan de l'Administration établi au 31 décembre 1961 ainsi que l'état des recettes et des dépenses pour l'année se terminant à cette même date, conformément au rapport de l'Auditeur général.

Suit un état des sources de fonds et de leur utilisation pour l'année 1961 et pour la période allant du commencement de la construction de la voie maritime jusqu'au 31 décembre 1961:

Cumulativement
du 1^{er} août 1954
au 31 décembre
1961

(En millions de dollars)

Produit de la vente d'immobilisations	0.4	0.4
Provision pour le remplacement du matériel non durable	0.2	0.9
Solde du passif net exigible au 31 décembre 1961	—	0.4
\$37.4	\$37.4	\$363.4
Emprunts et autres dettes		
Emprunts contractés en vertu de l'art. 25 de la Loi	\$22.5	\$328.0
Intérêts différés (C. P. 1961 1863)	14.3	33.7
36.8	361.7	
Utilisation des fonds		
Immobilisations additions brutes	\$16.3	\$323.4
Coût de construction ou d'acquisition	.5	17.3
Intérêts durant la construction	16.8	340.7
\$37.4	\$37.4	\$363.4

Investissement - Cornwall International Bridge Co. Ltd.	10.3	22.5
Perte nette	—	0.2
Diminution du passif net exigible durant 1961 (y compris le paiement de 9.7 millions, soit le solde des intérêts courus en 1960)	10.3	
\$37.4	\$37.4	\$363.4

Emprunts

Jusqu'à ce que la Loi sur l'Administration de la voie maritime du Saint-Laurent soit modifiée, le 28 février 1962, les emprunts effectués par l'Administration étaient limités à \$335 millions, dont \$328 millions avaient déjà été empruntés à la fin de 1961. La modification du 28 février 1962 a porté la limite des emprunts à \$345 millions. Il est prévu que l'augmentation qui a été autorisée sera utilisée en grande partie au cours de 1962 et de 1963 pour l'achèvement de la construction.

Paiements différés des intérêts

Aux termes des premiers arrangements financiers conclus par l'Administration, le paiement des intérêts sur les emprunts n'était exigé que durant les trois premières années complètes d'exploitation (soit jusqu'au 31 décembre 1962); par la suite, soit pour une période de quarante-sept ans se terminant le 31 décembre 2009, il devait être payé des montants annuels suffisants pour amortir tous les emprunts et tous les intérêts sur ces emprunts.

En décembre 1961, par le décret C.P. 1961-1863, les termes des arrangements financiers de l'Administration ont été modifiés, de sorte que le montant principal des emprunts contractés en vertu de l'article 25 de la Loi ainsi que les intérêts antérieurement différés et tous les autres intérêts maintenant courus ou qui seront courus en décembre 1963 doivent être remboursés, avec les intérêts courants sur ces montants, en quarante-six versements annuels égaux effectués de 1964 à 2009 inclusivement. En vertu de ce décret, le paiement des intérêts courus en 1961 a été différé.

Dépenses en immobilisations

La dépense de 16.3 millions effectuée pour l'acquisition ou la construction d'immobilisations au cours de 1961, y compris un montant de 7.2 millions versé pour

* Chez l'imprimeur de la Reine, Ottawa—N° de catalogue TS 2-162

la voie maritime*.

Le Manuel des capitaines pour la voie maritime publie les Saint-Laurent, en vue de fournir aux capitaines des navires et aux autres personnes intéressées les renseignements et les règlements ayant trait au transit dans

l'année.

Les deux organismes de la voie maritime publient de la voie maritime à diverses occasions au cours de l'organisation et de la direction de visites des ouvrages internationaux des congrès de navigation, en vue de de groupements officiels, dont l'Association permanente

L'Administration a collaboré avec un certain nombre

techniques utilisées en Europe.

Ils ont présenté des rapports sur les résultats de leurs enquêtes relatives aux installations, aux méthodes et

et de l'utilisation de la voie maritime du Saint-Laurent. d'un certain nombre de pays au sujet des installations

ment entretenus avec les fonctionnaires de la navigation

Les représentants de l'Administration se sont également

divers pays du monde, outre les pays européens.

a diffusé également au Canada, aux États-Unis et dans

ont diffusé des exemplaires dans toute l'Europe. On en

des gouvernements du Canada et des États-Unis en

vistiteurs au kiosque de la voie maritime. Les bureaux

déplient en couleurs et illustré en français, en anglais

Les organismes de la voie maritime publieront un

kiosque.

ment français et d'autres gouvernements ont visité le

et un certain nombre de fonctionnaires du gouverne-

blique, les ambassadeurs du Canada et des États-Unis

Le général Charles de Gaulle, président de la Répu-

MAQUETTE DE LA VOIE MARITIME DU SAINT-LAURENT MONTÉE EN FRANCE



Installation d'un circuit de téléimprimeurs

Afin d'accélérer le mouvement des navires dans la voie maritime et de faciliter les arrangements financiers en vue de la traversée, l'Administration a installé un circuit de téléimprimeurs qui va de Saint-Lambert à Port Colborne. Le mouvement des navires à toutes les échelles fait l'objet d'un rapport envoyé chaque jour au bureau principal du réseau.

de cette Corporation.

Au cours de l'année dernière, un programme prévoyant la disposition de matériel et l'équipement qui ne sont plus requis a été appliqué de façon continue par l'Administration. Tous les cas sont réglés par l'entremise de la Corporation de disposition des biens de la Couronne et il nous fait plaisir de signaler l'aide et la collaboration que nous ont apportées les fonctionnaires

PERSONNEL

canes, les congés de maladie, les gratifications au départ, les congés statutaires, les règles relatives à la retraite et la péréquation des taux d'indemnisation des employés à l'entretien dans les limites des trois régions. Elle prévoit aussi l'emploi à l'année et la semaine de cinq jours pour les employés à l'exploitation qui, auparavant, travaillaient six jours par semaine durant la saison de navigation.

Un programme d'évaluation des emplois a été entrepris en vue d'établir une juste correspondance entre les salaires et traitements et les fonctions et responsabilités. L'administration tient à exprimer sa satisfaction à tous ses fonctionnaires et employés pour la loyauté et la compétence dont ils ont fait preuve.

Le rôle joué par les services d'information de l'Administration est très varié. Ils publient des communiqués et des annonces à l'intention des usagers, des journaux, des ministères de l'Etat et des organismes publics. Ils répondent aussi aux demandes de renseignements qui leur viennent du secteur public et privé, tant au Canada qu'à l'étranger.

En octobre 1961, l'Administration de la voie maritime du Saint-Laurent (Canada) et la Saint Lawrence Seaway Development Corporation (Etats-Unis) ont

participé à l'Exposition internationale de la navigation fluviale dans le cadre du vingt-septième «Salon nautique international» annuel tenu à Paris. Des membres du personnel des deux organismes recevaient les visiteurs au kiosque qui y avait été aménagé par la Commission des expositions du gouvernement canadien. Les représentants de l'Administration ont participé aux Journées d'études internationales de la Voie d'eau qui se sont tenues au Palais de l'UNESCO à Paris, les 1^{er}, 2 et 3 octobre.

SERVICES D'INFORMATION

Les rapports sur l'avancement des travaux techniques démontrent que la travée du pont international de Cornwall-Massena qui enjambe le chenal nord pourra être ouverte à la circulation au début de l'été de 1962. L'inauguration officielle aura lieu vraisemblablement le 3 juillet 1962, ou vers cette date.

Pont international de Cornwall-Massena

tion de ce programme comprendra le labourage, le passage de la herse à disques, l'ensemencement, la fertilisation et la répression des mauvaises herbes.

ADMINISTRATION

La mesure des niveaux et du débit des eaux a été effectuée toute l'année afin de régulariser l'écoulement des eaux dans les canaux, d'empêcher les crues et de conserver les réserves d'eau nécessaires à la navigation, à la production de l'électricité, à l'alimentation en eau des villes et aux autres services d'eau en location.

Hydraulique

La mesure des fils électriques à l'écluse 5, a renouvelé une partie des fils électriques à l'écluse 5, porte et des portes d'écluse. Au canal de Lachine, on a réparé la réparation générale des murs de béton, des seuils de des machines du type à bîelle; on a aussi procédé à la hydraulique de l'écluse 15 du canal de Cornwall par a remplacé les machines des portes à fonctionnement du bafoyer nord de l'écluse de Sault-Sainte-Marie; on a poursuivi le programme consistant à refaire le parement Lachine, de Cornwall et de Sault-Sainte-Marie; on a des portes d'écluse de recharge pour les canaux de Sur les canaux non soumis au péage, on a construit autres réparations et remplacements nécessaires.

Pendant la saison d'hiver, on a fait la révision complète du moteur diesel principal du remorqueur GLE-NADA ainsi que des auxiliaires comme les pompes, les génératrices, l'appareil à gouverner, le système de collecteurs à trolley et des indicateurs précis d'élévation et on les a installés aux ponts de Valleyfield et de Saint-Louis. A l'écluse de Côte-Sainte-Catherine, une porte a été soulevée sur vérin et l'on a procédé à l'installation d'un pivot de porte modifié et effectué les autres réparations et remplacements nécessaires.

Durant la construction du chenal de navigation du côté sud de l'île de Cornwall, on a conclu une entente spéciale pour se débarrasser de l'argile à blocs provenant du dragage du chenal. La *St. Regis Indian Band* a accordé à l'Administration la permission de déposer ces déblais sur des terres basses situées du côté nord de l'île de Cornwall stipulant que toute cette région devrait être mise en état de culture. On a commencé un programme de deux années visant à rendre propres à l'agriculture quelque 200 acres de terre. La réalisation

Île de Cornwall

canal de Welland. sage et de vidange des écluses, tout particulièrement au tion du génie dans la poursuite des essais de remplissage et de vidange des écluses, tout particulièrement au commandement des vanes à Saint-Lambert. Un travail harnois; et l'installation d'un meilleur système de des disjoncteurs de l'alimentation de l'écluse, à Beau-Canada; l'installation d'un système de télécommande ge pour le compte du Service hydrographique du lation de dispositifs d'alimentation aux puits de jaugea- dans le domaine de l'électricité comprennent l'installation de dispositifs d'alimentation aux puits de jaugea- la rive sud seulement. Les autres travaux exécutés clairage sur une longueur de six milles, sur le canal de martime a dû remplacer les circuits d'énergie et d'é- aériennes de transmission d'énergie électrique des ré- mois de février a gravement endommagé les lignes La grosse tempête de pluie et de neige mêlées du d'empêcher l'érosion.

en outre, la berge a été perçoyée à divers endroits afin a été exécuté par le personnel de l'Administration et, dragage, destiné à assurer la profondeur des chenaux, me interromptu de balayage et de légers travaux de rées ou dotées d'un nouveau revêtement. Un program- de pont et autres surfaces de roulement ont été répar- importantes aux poutres de voie et aux poutres seg- ont été exécutées, principalement au canal de Welland. cluse, des déversoirs, des conduits et autres structures

témoinne la diminution du nombre d'accidents qui était de 15 par 1,000 passages en 1960 et de 34 par 1,000 en 1959.

Installation de clôtures et aménagement paysager

Dans le canal de Welland, on a installé une clôture de sécurité de quatre pieds de hauteur du côté ouest des écluses 3, 5 et 7 pour assurer la protection du public, et, à cette même fin, des garde-corps et des clôtures ont aussi été installées le long de la voie d'accès aux écluses de Beauharnois. Le programme de rebatement entrepris il y a quelques années au canal de Welland s'est poursuivi par la plantation de 5,000 jeunes plants qui accorderont aux navires une protection supplémentaire contre les grands vents.

Nettoyage du deuxième canal de Welland

Le nettoyage de l'ancien deuxième canal de Welland comprenait la remise en état de terrains des municipalités de St. Catharines, Merriton et Thorold à travers lesquels passaient les chenaux de l'ancien canal construit il y a un siècle. Les travaux de nettoyage, commencés en 1958, ont été terminés en 1960 et ils ont coûté, au total, environ un million et demi de dollars.

Améliorations

Dans la section du fleuve Saint-Laurent, l'installation du système d'insufflation de bulles d'air près des pontrelles et du système de jet d'air aux portes d'écluse a été complétée par l'adjonction d'un compresseur fixe et la pose d'une tuyauterie permanente. Le système s'est révélé très efficace pour faciliter l'enlèvement des pontrelles au début du printemps. On a installé des nouveaux moteurs de vanne afin d'améliorer les conditions hydrauliques et de diminuer les oscillations de courant dans les écluses; on a installé de nouveaux écrans de distance, de nouveaux signaux d'approche dans toutes les circonscriptions; on a aussi apporté, à l'écluse de Saint-Lambert, des modifications aux chaînes de raccorciamento des chaînes de contrepois de la travée levante du pont Victoria et du pont de la route de Sainte-Catherine, on a terminé l'installation des défenses en bois sur les murs d'approche. Des feux d'avertissement clignotants pour la circulation routière ont été posés aux ponts de Valleyfield et de Saint-Louis. Dans le canal de Welland, un programme de remplacement des seuils de porte en bois par des seuils en acier, entrepris en 1960, s'est poursuivi en 1961 par

Entretien

On a exécuté un programme complet d'entretien préventif et correctif du matériel, des ouvrages et des machines, y compris le graissage ordinaire de toutes les pièces mécaniques et de tous les câbles métalliques des ponts, des portes, des vanes et des défenses. On a fait régulièrement la lecture mensuelle des charges électriques de toutes les machines et l'on a établi des relevés graphiques indiquant la courbe du temps de graissage afin de les rendre conformes aux nouvelles méthodes et aux nouveaux produits et d'uniformiser l'emploi des lubrifiants dans toutes les circonscriptions. Outre les ouvrages de la voie maritime, l'Administration s'est occupée de l'entretien de certaines installations municipales qui relèvent de sa compétence, comme les systèmes d'égout, les stations de pompage et les prises d'eau. Durant l'année, on a relevé certaines soudures déficientes sur les poutres supérieures des ponts levants verticaux dans la section du Saint-Laurent et l'on a institué un programme d'entretien correctif. Des travaux importants de réparation du béton des murs d'é-

tallations du canal.

Sur les canaux non soumis au péage, on a terminé le type perfectionné ont été installés à plusieurs écluses. La construction du nouveau pont tournant enjambant le troisième canal de Welland à Port Dalhousie. On a terminé la construction de nouveaux abris pour les machines à Sault-Sainte-Marie. On a aussi terminé la levée de Cardinal au canal de Cornwall. Au canal de Lachine, on a remplacé la passerelle du déversoir n° 3 par un remblai percé de quatre conduits et le trottoir du pont 7 a été déplacé de façon à assurer plus de sécurité aux piétons. On a entrepris une étude de l'état de tous les ouvrages du canal de Lachine et il en est résulté un projet de réparation complète du pont 4 et d'améliorations importantes à diverses ins-

Dans la section du Saint-Laurent, 24 navires impliqués dans des accidents ont causé environ 13 heures de retard et, dans le canal de Welland, il y a eu 38 accidents qui ont entraîné des retards formant un total de 31 heures. Une analyse des statistiques concernant le canal de Welland révèle que moins de trois navires d'eaux intérieures par 1,000 passages ont été impliqués dans des accidents contre onze navires océaniques par 1,000 passages. Bien que le nombre proportionnel de navires océaniques impliqués dans des accidents soit élevé comparativement à celui des navires d'eaux intérieures, il est encourageant de constater que la navigation des océaniques continue de s'améliorer, comme en

Diverses causes ont retardé la navigation, notamment les conditions atmosphériques défavorables comme les grands vents et la brume. Le mauvais temps a causé la perte de 657 heures, soit l'équivalent d'un mois entier d'exploitation. Les défaillances du matériel ont été responsables de retards formant un total de 125 heures, la plus grande partie de ces retards, soit 94 heures, étant survenue dans le canal de Welland.

Accidents et retards

L'emploi des communications radiotéléphoniques à très haute fréquence (VHF) a été fortement recommandé depuis l'ouverture de la voie maritime et l'entretien obligatoire de l'emploi des communications VHF pour les messages relatifs à la régulation a compté de l'ouverture de la saison de navigation de 1962. Toutefois, l'Administration continuera d'assurer l'écoute sur la fréquence moyenne.

Le nombre des infractions au Règlement de la voie maritime qui ont été signalées est supérieur à celui de l'année précédente, spécialement en ce qui a trait aux indications de limite d'approche, aux signaux d'arrêt et aux feux de signalisation des ponts et des écluses. On est à prendre les mesures nécessaires en vue du règlement de ces cas.

L'emploi des communications radiotéléphoniques à très haute fréquence (VHF) a été fortement recommandé depuis l'ouverture de la voie maritime et l'entretien obligatoire de l'emploi des communications VHF pour les messages relatifs à la régulation a compté de l'ouverture de la saison de navigation de 1962. Toutefois, l'Administration continuera d'assurer l'écoute sur la fréquence moyenne.

La saison de navigation, cette année encore, a été marquée par une amélioration du mouvement des navires et un écoulement du trafic plus régulier. Les capitaines des océaniques se familiarisent rapidement avec la navigation dans les canaux et les pilotes sont devenus plus habiles à conduire la grande variété de navires océaniques qui traversent la voie maritime.

On a établi une limite de vitesse uniforme pour tous les navires, la saison prochaine, afin d'accroître la sécurité tant aux navires en mouvement qu'aux installations de la Voie maritime et afin d'éviter toute congestion près des écluses. Il n'en résultera pas nécessairement

Mouvements des navires

Pendant la morte-saison de navigation, on a fait une inspection minutieuse du matériel d'amarrage de 218 navires d'eaux intérieures mouillant à des postes d'hivernage à partir de Duluth jusqu'en aval de Mont-réal et, en avril, on a recommencé à inspecter les navires océaniques entrants. Au total, il a été effectué 289 inspections de navires à leur premier voyage en plus des inspections périodiques qui se renouvellent au cours de l'année.

Inspection des navires

Au cours de la morte-saison de navigation, des cours d'instructions destinés aux régulateurs, écluseurs et autres préposés à l'exploitation ont été donnés au bureau central de Cornwall et sur le canal de Welland; ces instructions portaient sur les différents aspects de l'exploitation concernant chacun de ces groupes.

Formation

lumineuses à la navigation et le trafic dans toutes les sections est demeuré faible durant cette première période. Le canal de Welland a été ouvert à la navigation le 1^{er} avril et le canal canadien de Sault-Sainte-Marie le 4 avril, soit deux jours plus tôt qu'en 1960. Grâce aux conditions météorologiques favorables, la section du Saint-Laurent est demeurée ouverte, de jour en jour, après le 30 novembre, date pour laquelle on avait annoncé la fermeture, et ce délai a permis aux navires d'eaux intérieures qui déchargeaient leurs cargaisons de grain en aval de la voie maritime de remonter l'écluse de Saint-Lambert le 2 décembre et le dernier navire remontant quittait l'écluse d'Iroquois le 7 décembre. Au total, 21 navires remontants sont entrés dans le réseau, à Saint-Lambert, après minuit le 30 novembre. Le canal canadien de Sault-Sainte-Marie a été fermé à la navigation le 12 décembre et le canal de Welland le 15 décembre, le dernier navire à y passer en étant sorti le 16 décembre.

Les règles et règlements d'exploitation destinés aux navires empruntant la voie maritime paraissent dans le Manuel des navigateurs pour la voie maritime, publié conjointement par les organismes dont relève la voie maritime. On peut en obtenir des exemplaires, au Canada, chez l'Imprimeur de la Reine à Ottawa et,

Règles et règlements de la voie maritime

L'exploitation et l'entretien de tous les canaux et Direction de l'exploitation et de l'entretien. Le personnel comprend environ 330 préposés à l'entretien exerçant une grande variété de métiers et environ 600 préposés à l'exploitation.

Exploitation et entretien

EXPLOITATION

CONFÉRENCE D'ÉTUDE DU PERSONNEL EXPLOITANT AU COURS DE L'HIVER



aux États-Unis, auprès de la *Saint Lawrence Seaway Development Corporation* à Massena (N.Y.).

La saison de navigation

La saison de navigation dans les canaux du Saint-Laurent s'étend habituellement de la mi-avril à la fin de novembre et, dans le canal de Welland, du 1^{er} avril à la mi-décembre. Durant cette période, toutes les installations de la voie maritime fonctionnent vingt-quatre heures par jour, sept jours par semaine.

Le débâcle printanier a permis d'ouvrir la section du Saint-Laurent le 15 avril, soit trois jours plus tôt qu'en 1960. Toutefois, durant les quelques premiers jours de navigation, le passage n'était autorisé que de jour tandis qu'on procédait au mouillage des aides

façon à ne plus présenter de tournaux dangereux. Les municipalités locales ont participé à cette dernière partie des travaux.

Remise en état des ponts du canal de Lachine

L'inspection des ponts qui enjambent le canal de Lachine a révélé que par suite de l'usure et de la corrosion, des réparations importantes étaient devenues nécessaires, spécialement en ce qui concernait le tablier. On a jugé opportun de profiter de l'occasion pour effectuer certaines modifications qui accroîtront la capacité des ponts et en amélioreront la manœuvre mécanique. Dans le cas du pont de la rue Charlevoix, les réparations se sont imposées d'urgence après qu'un navire eut heurté le pont dans les derniers jours de la saison de navigation de 1961. Des réparations provisoires ont été faites pour permettre le passage des véhicules mais le mécanisme de manœuvre ne fonctionne plus. On compte avoir terminé, avant l'ouverture de la saison de navigation de 1962, le remplacement du mécanisme désuet par une installation d'un type moderne.

Autres études techniques

Outre les études qui ont conduit à la décision d'excuter les travaux mentionnés ci-dessus, des études ont été faites, en 1961, en vue de découvrir les moyens d'améliorer les conditions de navigation au pont 15 du canal de Welland et d'autres études ont porté sur la possibilité de modifier les murs de chute des écluses de façon à mieux protéger les portes contre les dommages causés par les navires remontants à étrave élançée.

Règlement des réclamations en suspens

Le 1^{er} janvier 1961, 34 réclamations faites par les entrepreneurs étaient en suspens et trois autres ont été présentées au cours de l'année. Sur ces 37 réclamations, 28 ont été réglées en 1961 et, dans 17 cas, le règlement s'est fait pour un montant recommandé par le comité maritime nommé par le Conseil du Trésor. Ce comité poursuit l'étude de cinq réclamations; des offres de règlement ont été faites dans le cas de deux réclamations et la réponse de l'entrepreneur en cause est attendue; une réclamation fait l'objet d'un litige devant les tribunaux et une réclamation a été nettement refusée.

Retenue en amont de l'écluse 7 du canal de Welland

À la suite d'études faites en vue d'obtenir un meilleur rendement, un contrat a été adjugé pour l'agrandissement de l'aire d'accumulation d'eau, en amont de l'écluse 7, lequel sera réalisé par le creusement d'une partie du parc Thorold. Les déblais serviront à l'amélioration du terrain marécageux connu sous le nom de Marlett's Pond.

Amélioration des terrains récupérés dans la ville de Longueuil

Un contrat a été donné pour l'aménagement des pentes, le drainage et la mise en place de terre végétale sur les terrains récupérés à l'est du chenal de la voie maritime dans la ville de Longueuil. Les travaux ont été entrepris et ont été terminés à l'automne de 1961.

Prolongement du bajoyer amont de l'écluse amont de Beauharnois

Afin de réduire les effets désagréables d'un courant à l'entrée amont de l'écluse amont de Beauharnois, un contrat a été accordé, le 9 novembre 1961, à la *Pentagon Construction Co. Ltd.* pour la construction d'un prolongement de 490 pieds au bajoyer actuel. Les travaux doivent être terminés pour le 15 mai 1962.

Nettoyage du deuxième canal de Welland

On a terminé, en 1961, le nettoyage de la partie du deuxième canal de Welland qui traverse la ville de Thorold et la ville de St. Catharines. Ce travail qui avait été amorcé par le ministère des Transports, a été poursuivi par l'Administration en conformité des ententes intervenues avec les municipalités en cause.

Pont tournant à Port Dalhousie, troisième canal de Welland

L'ancien pont-route à l'écluse de Port Dalhousie était à la fois insuffisant et dangereux parce qu'il n'était pas assez large et que des virages très accentués en marquaient les approches. Un nouveau pont tournant a été construit, en 1961, en remplacement de l'ancien pont, et les approches ont été modifiées de

sion en eaux calmes et pour que le ponton soit plus facile à diriger, on l'a équipée de deux hélices cyclo-
dales Voith-Schneider, une à chaque extrémité. Le
groupe diesel-électrique, les commandes et toutes les
autres installations seront des types les plus efficaces
et les plus modernes.

Moteurs de secours des ponts du canal de Welland

On s'est rendu compte, en 1960, que les moteurs
de secours du type à essence, installés il y a trente
ans aux ponts mobiles, en étaient rendus à un point
où la réparation de ce matériel, si désuet qu'il n'y a
plus moyen d'obtenir des pièces de remplacement,
représente des frais et des difficultés tels qu'il serait
très opportun de les remplacer par des moteurs mo-
dernes du type diesel. Le coût de moteurs d'un type
nouveau et de systèmes de transmission appropriés
de type moderne est très inférieur au coût de renou-
vellement de l'ancien matériel.

Quatre ponts ont été dotés de moteurs de secours
et de systèmes de transmission du nouveau type, en
1961, et un contrat, à exécuter en 1962, a été accordé
pour l'installation de matériel semblable à cinq autres
ponts.

Systèmes de commande à distance aux ponts du canal de Welland

À la suite d'études, il a été décidé d'installer le
système de commande Bridge-O-Matic à certains ponts
mobiles situés à proximité des écluses. Ce système
permet à l'éclusier de manœuvrer le pont par télé-
commande à partir de la cabine de commande de
l'écluse.

On projette d'installer ce système aux ponts 1, 7,
9, et 19, en 1962, les matériaux nécessaires ayant été
commandés vers la fin de 1961.

Amélioration des conditions hydrauliques aux écluses du canal de Welland

Un programme d'essais et de recherches avait été
établi en 1960 afin d'étudier les méthodes propres à
réduire le temps de remplissage et de vidange des
écluses. Ce programme a nécessité la coordination des
efforts des sections de l'hydraulique et de l'électro-
mécanique et a conduit à l'adoption d'un procédé modi-
fié de manœuvre des vannes faisant appel à un type
de moteur et de commande à vitesse variable, joint à
des orifices hydrauliques modifiés.

Cinquante moteurs du nouveau type achetés en 1961
ont été livrés tard dans la saison. On a procédé à
l'installation de ces moteurs aux vannes de l'écluse 7

et de l'écluse 5 est, où les résultats obtenus ont donné
entière satisfaction. Par suite de l'installation de ces
moteurs et des modifications apportées aux conditions
hydrauliques aux orifices, le temps de remplissage des
écluses a été réduit de 15 minutes à 8½ minutes. Le
temps de vidange pourra être réduit encore jusqu'à
7½ minutes. Ces économies de temps sont importantes
et augmenteront la capacité de trafic du canal. L'ins-
tallation des moteurs se poursuit.

Remise en état des ponts levants à bascule du canal de Welland

On avait commencé, durant l'hiver 1960-1961, la
remise en état des poutres de la voie et des semelles
des poutres segmentaires des ponts levants à bascule.
Ces travaux se poursuivent pendant la morte-saison
de navigation 1961-1962, et l'on espère les terminer
au cours de la présente saison.

Modifications apportées aux seuils des portes busquées dans le canal de Welland

Depuis leur construction, il y a trente ans, les seuils
à revêtement de bois des portes busquées ont nécessité
un entretien constant. En décembre 1959, on a insti-
tué un programme de remplacement de ces seuils. Le
nouveau modèle comporte des seuils permanents en
acier et béton, munis de fourrures d'étanchéité en
caoutchouc destinées à réduire les fuites. Ces travaux se
sont poursuivis au cours des trois dernières saisons;
ils devraient être terminés pour l'ouverture de la
saison de navigation de 1962.

Défenses en bois sur les bajoyers d'entrée

Par suite de l'expérience acquise durant la première
saison d'exploitation de la voie maritime, on a jugé
opportun d'installer des défenses quelconques sur les
bajoyers d'entrée afin de réduire les dommages que
peuvent s'infliger les navires en cas de heurt ou de
frottement contre le béton. Le modèle adopté comprend
un revêtement de chêne blanc sur certaines surfaces
et du caoutchouc butylique retenu par des câbles d'acier
sur les autres surfaces; la plupart des écluses sont
maintenant munies de ces défenses. On a installé des
défenses, durant l'hiver de 1959-1960, aux écluses de
Beaumaris et, au cours de l'hiver de 1960-1961, aux
écluses de Côte-Sainte-Catherine et de Saint-Lambert.
Durant l'hiver de 1961-1962 l'installation des défenses
supplémentaires aux écluses 1, 2 et 3 ainsi qu'à la

porte de garde du canal de Welland.

une hauteur au-dessus du niveau de l'eau équivalente à celle d'un immeuble de quinze étages, sera montée sur un ponton d'environ 200 pieds de longueur sur 75 pieds de largeur. Dans sa fonction de lève-portes, qu'elle exercera dans la voie maritime, cette grue pourra soulever un battant de porte busquée de 275 tonnes au-dessus de l'avant du ponton, le faire pivoter dans un rayon minimum et le déposer sur le pont arrière. Comme grue à marchandises, elle pourra manœuvrer, par le travers, des charges de 150 tonnes dans les opérations de chargement et de déchargement des océaniques dans les ports. Pour assurer l'autopropul-

Les péages appliqués au trafic de la voie maritime ont rapporté, en 1961, des recettes s'élevant à \$12,867,511. Le tableau ci-après donne les chiffres comparatifs des trois saisons d'exploitation de la voie maritime et le partage de ces péages entre le Canada et les États-Unis.

Lachine	Canal	Nombre de traversées	Jauge brute au registre (tonneaux)	cargaison de	Péages	
					1961	1960
Navires remontants		965	762,371	40,003		
Navires descendants		1,160	1,063,659	1,052,952		
Total		2,125	1,826,030	1,092,955		
Cornwall		200	136,168	193,438		
Navires remontants		189	130,563	—		
Navires descendants		389	266,731	193,438		
Total		1,342	2,871,805	475,263		
Navires remontants		2,113	1,635,741	672,122		
Navires descendants		3,455	4,507,546	1,147,385		
Total						

ont emprunté ces canaux ont été les suivants:

TRAVAUX DE GÉNIE

Cette grue géante, à double fonction, entièrement pivotante et dont l'extrémité des flèches peut atteindre 1962.

maintenant en cours et l'on compte que la grue sera prête à subir ses premiers essais vers la fin de l'été 1962.

Un contrat pour la construction de cette importante machine a été accordé à la *Marine Industries Limited*, le 19 mai 1961, après l'établissement d'un devis de performance acceptable par les ingénieurs-conseils *Sir Alexander Gibb and Partners*. La construction est maintenant en cours et l'on compte que la grue sera prête à subir ses premiers essais vers la fin de l'été 1962.

Grue flottante pivotante à autopropulsion

En 1961, le nombre de traversées, le nombre de tonnes transportées ainsi que la jauge des navires qui

Trafic dans les canaux non soumis au péage

Dentées	1960	Pourcentage du total	1961	Pourcentage du total	%	%
Blé	4,490,511	15.4	7,218,003	22.9	5.8	27.4
Mais	1,335,329	4.6	1,821,618	5.8	1.5	2.6
Avoine	559,007	1.9	344,478	1.1	2.5	.7
Orge	1,423,488	4.9	898,772	2.9	26.8	21.2
Charbon	4,396,884	15.0	4,356,729	13.9	274,274	21.2
Minéral de fer	7,856,479	26.8	6,672,124	21.2	245,471	2.5
Bois de pâte	274,274	.9	245,471	.7	831,211	2.5
Huile combustible	735,704	2.5	831,211	2.6	445,354	1.5
Papier-journal	445,354	1.5	476,294	1.5	7,732,659	26.5
Toutes autres dentées	7,732,659	26.5	8,590,103	27.4	29,249,689	100.0
Total	29,249,689	100.0	31,454,803	100.0		

1961. Le minéral de fer a passé de la première à la deuxième place et il a constitué 21.2 p. 100 du total; le charbon, qui arrive au troisième rang, a représenté 13.9 p. 100 du tonnage total. Le maïs a représenté 5.8 p. 100 du trafic et l'orge, l'huile combustible et le papier-journal ont été les autres dentées importantes.

Section du canal de Welland

La composition du trafic empruntant le canal de Welland diffère quelque peu de celle du trafic traversant la section du Saint-Laurent de la voie maritime. De nombreux navires venant de ports étrangers sont entrés dans la voie maritime et ont traversé les deux canaux, mais bon nombre de navires ont transporté dans le canal de Welland ce qu'on pourrait appeler du trafic local entre des ports du Canada et des États-Unis. Il s'agit principalement des cargaisons descendantes de grains, de minéral de fer et de charbon. Dans le canal de Welland, il y a eu 3,895 traversées de navires remontants et 3,852 traversées de navires descendants, en 1961, soit un total de 7,747 par comparaison à un total de 7,536 en 1960. La jauge brute au registre de tous les navires a atteint 40,724,000 tonnes, soit une augmentation de 13,9 p. 100 en direction ouest et une diminution de 7,3 p. 100 en direction ouest. Les cargaisons descendantes ont atteint 23,787,000 tonnes, s'est élevé à près de 7,668,000 tonnes et celui des traversées sur lest ou des traversées de navires dans un seul sens. Le tonnage des cargaisons remontantes s'est élevé à près de 7,668,000 tonnes et celui des traversées sur lest ou des traversées de navires dans un seul sens. Le tonnage des cargaisons remontantes s'est élevé à près de 7,668,000 tonnes et celui des traversées sur lest ou des traversées de navires dans un seul sens. Le tonnage des cargaisons remontantes s'est élevé à près de 7,668,000 tonnes et celui des traversées sur lest ou des traversées de navires dans un seul sens.

Une grande partie des cargaisons ayant transité dans le canal de Welland était composée de trafic transporté dans les limites des lacs entre des ports canadiens et des ports des États-Unis. Les tableaux indiquent que 28,6 p. 100 des denrées ont été transportées entre des ports canadiens, 3,1 p. 100 entre des ports des États-Unis et 48,4 p. 100 entre un port des États-Unis et un port canadien. Le trafic d'importation et d'exportation en provenance et à destination de ports d'outre-mer composait le reste, soit 19,9 p. 100.

Welland:

Tout comme dans la section du Saint-Laurent, le blé a été, selon la quantité transportée, la plus importante des denrées composant le trafic du canal de Welland et a représenté 22,9 p. 100 du trafic total de

Nombre de traversées	1959	1960	1961
Jauge nette enregistrée	8,072	7,536	7,747
Jauge brute enregistrée	21,955,360	23,924,407	27,739,846
Cargaison—En vrac	32,684,316	35,528,265	40,724,078
Diverses	22,692,995	27,358,103	29,576,436
Péages en dollars	1,843,563	1,891,586	1,878,367
	1,229,301	1,318,357	1,460,451

Les cargaisons en vrac remontantes, qui avaient baissé en 1961 comparativement à 1960, ce qui reflète une diminution des expéditions de minéral de fer. En revanche, les cargaisons descendantes ont augmenté considérablement en raison du mouvement important des stocks de grains vers les ports du bas Saint-Laurent et d'outre-mer.

Les mouvements du trafic suivant le point d'origine ou de destination des navires indiquent que, en ce qui concerne les traversées de cette section, 38,6 p. 100 du trafic total ont été transportées entre deux ports canadiens, 29,2 p. 100 entre un port canadien et un port des États-Unis et que 31,7 p. 100 étaient constituées par du trafic étranger en provenance ou à destination du Canada ou des États-Unis, alors que seulement 0,5 p. 100 des denrées transportées sur le Saint-Laurent étaient en provenance et à destination des États-Unis.

Voici un tableau comparatif du trafic total remontant et descendant ayant traversé la section du Saint-Laurent:

	1959	1960	1961
Nombre de traversées	7,452	6,869	6,892
Jauge brute enregistrée	16,249,082	16,158,261	18,931,388
Jauge nette enregistrée	25,085,995	25,131,250	28,908,578
Cargaisons—En vrac	18,642,979	18,056,449	21,343,557
Diverses	1,950,163	2,253,897	2,074,183
Péages en dollars	10,052,234	10,109,059	11,407,060

Le tableau ci-après donne les chiffres relatifs au trafic de certaines denrées transportées dans la section de Montréal—lac Ontario de la voie maritime. Selon la quantité transportée, le blé est maintenant la plus importante des denrées composant le trafic de cette section, le tonnage total ayant augmenté de 69,2 p. 100 par rapport à 1960. Le minéral de fer vient en deuxième place bien qu'il ait accusé une baisse de 6,9 p. 100 comparativement à 1960, et il représente 17,2 p. 100 de l'ensemble du trafic de cette section de la voie maritime. Le maïs, l'orge, le charbon et l'huile combustible sont les autres denrées qui représentent une partie importante du tonnage total.

Denrée	1960	Pourcentage du total	1961	Pourcentage du total
Blé	3,853,923	%	6,521,068	%
Maïs	1,101,854	19.0	1,601,590	27.8
Orge	498,455	2.5	271,328	6.8
Avoine	1,177,552	5.8	692,727	1.2
Charbon	1,020,467	5.0	1,155,528	3.0
Minéral de fer	4,315,432	21.2	4,017,254	17.2
Bois de pâte	257,968	1.3	176,887	0.8
Huile combustible	1,177,697	5.8	1,103,652	1.2
Papier-journal	272,814	1.3	290,122	4.7
Toutes autres denrées	6,634,184	32.7	7,587,564	32.4
Total	20,310,346	100.0	23,417,720	100.0

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

R. J. RANKIN, *Président*

PIERRE CAMU, *Vice-président*

PERSONNEL DE DIRECTION

R. J. BURNSIDE *Directeur de l'exploitation et de l'entretien*
LUC-ANDRÉ COUTURE *Avocat-conseil*
P. E. R. MALCOLM *Secrétaire et Directeur de l'administration*
A. G. MURPHY *Ingénieur en chef*
D. W. G. OLIVER *Contrôleur*
REMARQUE: M. J. M. Martin a succédé à M. D. W. G. Oliver au poste de contrôleur, le 1^{er} janvier 1962.
M. L. H. Burpee a succédé à M. A. G. Murphy au poste d'ingénieur en chef, le 1^{er} mars 1962.

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

Le 17 avril 1962

L'HONORABLE LÉON BALCER
Ministre des Transports
Ottawa

Monsieur,

Je vous présente ci-joint le rapport de l'Administration de la Voie maritime du Saint-Laurent pour la période allant du 1^{er} janvier 1961 au 31 décembre 1961, en conformité du paragraphe (3) de l'article 85 de la *Loi sur l'administration financière*, chapitre 116, S.R.C. 1952.

Respectueusement soumis,

Le Président,
R. J. RANKIN.

1961

RAPPORT ANNUEL

DU SAINT-LAURENT

DE LA VOIE MARITIME

L'ADMINISTRATION



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Government
Publications



THE ST. LAWRENCE
SEAWAY AUTHORITY

1962



**THE ST. LAWRENCE SEAWAY
AUTHORITY**

**ANNUAL
REPORT
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THE ST. LAWRENCE SEAWAY AUTHORITY

March 29, 1963.

THE HONOURABLE LEON BALCER,
Minister of Transport,
Ottawa, Ontario.

Dear Sir:

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1962 to December 31, 1962, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

R. J. RANKIN,

President.

THE ST. LAWRENCE SEAWAY AUTHORITY

R. J. RANKIN, President

PIERRE CAMU, Vice-President

EXECUTIVE OFFICERS

R. J. BURNSIDE *Director of Operation*

L. H. BURPEE *Chief Engineer*

L.-A. COUTURE *General Counsel*

P. E. R. MALCOLM *Secretary and Director of Administration*

J. M. MARTIN *Director of Finance and Accounting*

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“Hercules” — Frank Reynolds — The St. Lawrence
Seaway Authority.

Bridge — Alexander R. Onoszko.

Welland Locks — Hunting Survey Corp. Ltd.

A detailed *Traffic Report* of the St. Lawrence Seaway for 1962 is available from the Queen's Printer, Cat. No. TS 2-2/1962 at 75 cents per copy.

The *St. Lawrence Seaway Masters' Handbook* containing Circulars and Regulations for transit of the Seaway is available from the Queen's Printer, Cat. No. TS 2-163 at \$2.50 per copy.

This Annual Report is available from the Queen's Printer, Ottawa and at Canadian Government bookshops at Ottawa, Montreal and Toronto. A deposit copy of this publication is also available for reference in public libraries across Canada.

THE ST. LAWRENCE SEAWAY AUTHORITY

ANNUAL REPORT 1962

This is the annual report of The St. Lawrence Seaway Authority for the year 1962, including the fourth operating season of the deep waterway between Montreal and Lake Erie.

The report also covers the operation and administration of the other canals transferred from the Department of Transport to the Authority, April 1, 1959.

During 1962 traffic was the heaviest of the four navigation seasons the Seaway has operated to date. In October a record was set for the largest total of cargo (3,873,000 tons) transiting the Seaway during any month since the system opened.

On July 5, vessels manned by members of the Seafarers International Union of Canada which applied to transit the St. Lawrence Seaway were boycotted by members of the Canadian Brotherhood of Railway, Transport and General Workers, which organization holds a collective agreement with The St. Lawrence Seaway Authority. On that same day a vessel was placed at Lock 1 of the Welland Canal and another vessel at Lock 8 in such a position that continued operation of the canal became impossible. The Authority obtained injunctions in the courts of the provinces of Ontario and Quebec to terminate the boycott.

On July 18 an Industrial Inquiry Commission as to Shipping in the Great Lakes and St. Lawrence River System was instituted under the Industrial Relations and Disputes Investigation Act, with the Honourable Mr. Justice T. G. Norris as Commissioner. Hearings which were held in Ottawa, Toronto, St. Catharines and Montreal began in August and were still continuing at the year end.

The St. Lawrence Seaway Authority is pleased to acknowledge good co-operation from the Saint Lawrence Seaway Development Corporation of the United States, Government Departments, both Federal and Pro-

vincial, the various power entities in Canada and the United States, other public and private bodies, the press and in particular the shipping organizations whose members provide the traffic for the St. Lawrence Seaway.

Traffic

Cargoes water-borne through the St. Lawrence and Welland Canals reached an all-time high in total movement amounting to approximately 25,593,600 tons on the St. Lawrence and 35,406,305 tons through the Welland Canal in 1962.

While the 1961 traffic was characterized by heavy downbound movements of wheat to the tide-water ports, the pattern shifted during 1962 with greater shipments of iron ore upbound through the canals. Downbound traffic was still high in 1962 under the movement of "other grains" from the Lakehead to Lower St. Lawrence, compensating for extensive loadings of wheat for overseas which took place in 1961.

Cargo of Canadian origin and/or destination accounted for 75% of the season's traffic.

Montreal—Lake Ontario Section

Upbound and downbound vessel transits through this section of the Seaway totalled 6,351 for the 1962 navigation season compared with 6,892 in 1961. The gross registered tonnage of all vessels was 31,011,000.

Upbound cargo totalled 10,879,000 tons and downbound, 14,714,000 tons. This represents an increase in total cargo of 9.3% when compared with 1961 and 24.3% over that recorded in 1959, the first year the St. Lawrence Seaway was in operation.

There were two transits by overseas ships to every three by inland vessels, but inland vessels carried almost

Direction	Bulk Cargoes					
	1960	Increase or Decrease %	1961	Increase or Decrease %	1962	Increase or Decrease %
Upbound	7,678,985	-20.4	7,015,145	- 8.7	9,374,400	+33.6
Downbound	10,377,464	+15.2	14,328,392	+38.1	13,701,592	- 4.4
Total	18,056,449	- 3.2	21,343,537	+18.2	23,075,992	+ 8.1

twice as much of the total traffic as did the overseas ships.

Direct overseas trade by way of the Seaway involved 2,302 transits and amounted to 9,016,028 tons, up 23% over 1961 and accounted for 35.2% of the total tonnage through the Canal.

Inland trade vessels or lakers made 1,780 trips upbound and 1,781 transits downbound, carrying cargoes of 16,534,000 tons—64.6% of all traffic and an increase of 3.3% in total inland shipping through the canal over 1961.

Shipments of bulk cargo comprised 90.2% of the season total or more than 23,075,000 tons compared with 21,343,000 tons in 1961. General cargoes, the balance of the traffic, amounted to 2,518,000 tons, an increase of 21.4% over 1961.

The revival of iron ore shipments increased upbound bulk cargoes substantially in 1962 compared with 1960 and 1961. Downbound cargoes showed the reverse trend with a decrease from 1961 due to the reduced movement of grain.

Shipments according to the origin or destination of the cargoes showed that 30.3% of the total traffic through this section of the Seaway was between two Canadian ports, another 37.0% moved between Canadian and U.S. ports, 32.2% consisted of foreign trade to and from Canada and the United States, while .5% of the commodities through the St. Lawrence section originated and terminated in the United States.

A comparative summary of the total upbound and downbound traffic for the Montreal-Lake Ontario Section is as follows:

Item	1960	1961	1962
No. of Transits . . .	6,869	6,892	6,351
Net Registered Tons .	16,158,261	18,931,388	20,272,318
Gross Registered Tons	25,131,250	28,908,578	31,011,461
Cargo — Bulk	18,056,449	21,343,537	23,075,992
— General	2,253,897	2,074,183	2,517,608
Total Revenue \$. . .	10,109,059	11,407,060	12,574,775

The table below indicates the traffic for selected commodities through the Montreal-Lake Ontario Section of the Seaway in 1961 and 1962. Wheat was replaced by iron ore as the most important single product moving through this section. The total tons of iron ore increased by 49.7% over 1961. Wheat was second in volume although showing a decrease of 24.8% from 1961 for a total of 19.2% of all traffic. Corn, barley, coal and fuel oil were the other commodities accounting for a significant portion of the total cargoes.

Commodity	1961	Percent of Total	1962	Percent of Total
		%		%
Wheat	6,521,068	27.8	4,903,785	19.2
Corn	1,601,590	6.8	2,187,703	8.5
Oats	271,328	1.2	685,501	2.8
Barley	692,727	3.0	1,099,499	4.3
Coal	1,155,528	4.9	1,185,609	4.6
Iron Ore . . .	4,017,254	17.2	6,014,788	23.6
Pulpwood . .	176,887	.8	170,369	.7
Fuel Oil . . .	1,103,652	4.7	1,239,956	4.8
Newsprint . .	290,122	1.2	311,594	1.2
All Other Commodities	7,587,564	32.4	7,794,796	30.3
TOTAL	23,417,720	100.0	25,593,600	100.0

Welland Section

The composition of traffic through the Welland Canal differs somewhat from the cargoes transiting the Montreal-Lake Ontario portion of the Seaway. While many ships enter the Seaway from the Lower St. Lawrence and foreign ports and traverse both canals, there was, however, a substantial amount of local traffic between U.S. and Canadian ports on Lake Ontario and the Upper Lakes through the Welland Canal. These movements were largely made up of downbound shipments of iron ore, coal and grain.

Vessel transits through the Welland were 3,843 upbound and 3,772 downbound in 1962 for a total of 7,615 compared with 7,747 in 1961. The registered gross tonnage of vessels was 43,153,000, an increase of 6.0% over the previous year. Of this total, 13,464,000 gross tons or 31.2% were ballast transits or vessels engaged in oneway traffic. Cargo tonnage amounted to 10,843,000 tons upbound, an increase of 41.4% and 24,563,000 downbound, an increase of 3.3% over last year. Cargoes classified as bulk shipments accounted for 94.1% of the Welland Canal traffic and 5.9% of the commodities carried were listed as general.

A large percentage of the Welland Canal shipments was interlake traffic between Canadian and United States ports. Tabulations show 21.9% of the commodities were carried between Canadian ports, 3.0% between United States ports and 55.8% between Canadian and United States ports. Import and export trade from and to overseas points accounted for the remaining 19.3%.

A general summary of the shipping activities on the Welland Canal is contained in the following table:



The North Channel span of the Seaway International Bridge links Cornwall Island with the Canadian mainland at Cornwall, Ontario.

Item	1960	1961	1962
No. of Transits	7,536	7,747	7,615
Net Registered Tons . .	23,924,407	27,739,846	29,295,035
Gross Registered Tons .	35,528,265	40,724,078	43,152,533
Cargo — Bulk	27,358,103	29,576,436	33,325,150
— General	1,891,586	1,878,367	2,081,155
Toll Revenue \$	1,318,357	1,460,451	(1)

(1) Tolls suspended as of July 18th, 1962, see tolls table.

Following the pattern of the St. Lawrence Section, iron ore was the most important commodity to transit the Welland from the point of view of volume and constituted 29.0% of the total traffic for 1962. Wheat dropped from first to second place with 15.0% of the total, with coal the third most important product and 13.7% of the total tonnage. Corn accounted for another

7.2% of the traffic, while barley, oats and fuel oil were the other significant commodities.

Commodity	1961	Percent of Total	1962	Percent of Total
		%		%
Wheat	7,218,003	22.9	5,303,163	15.0
Corn	1,821,618	5.8	2,515,229	7.2
Oats	344,478	1.1	717,153	2.0
Barley	898,772	2.9	1,293,678	3.6
Coal	4,356,729	13.9	4,851,025	13.7
Iron Ore	6,672,124	21.2	10,266,609	29.0
Pulp Wood	245,471	.7	162,903	.5
Fuel Oil	831,211	2.6	891,595	2.5
Newsprint	476,294	1.5	475,926	1.3
All Other Commodities	8,590,103	27.4	8,929,024	25.2
TOTAL	31,454,803	100.0	35,406,305	100.0

Canal and Direction	No. of Transits		Gross Registered Tons		Cargo Tons	
	1961	1962	1961	1962	1961	1962
Lachine:						
Up	965	715	762,371	581,238	40,003	39,453
Down	1,160	828	1,063,659	801,527	1,052,952	849,211
Total	2,125	1,543	1,826,030	1,382,765	1,092,955	888,664
Cornwall:						
Up	200	225	136,168	130,898	193,438	171,077
Down	189	221	130,563	130,975	—	—
Total	389	446	266,731	261,873	193,438	171,077
Sault Ste. Marie:						
Up	1,342	1,079	2,871,805	2,138,327	475,263	361,531
Down	2,113	2,077	1,635,741	1,804,901	672,122	736,655
Total	3,455	3,156	4,507,546	3,943,228	1,147,385	1,098,186

Traffic in Non-Toll Canals

Vessel transits and tonnages for these canals in 1961 and 1962 were as in table above.

Tolls

Seaway traffic in 1962 yielded toll revenue amounting to \$12,574,775. This figure includes however, \$640,193 tolls collected on the Welland Canal to July 18, 1962 only, when tolls were suspended by Order-in-Council P.C. 1962-1032.

The following table shows the tolls collected for 1960, 1961 and 1962 but does not include charges for pleasure craft transits or other miscellaneous revenues shown in the financial section of this report.

Area	1960 \$	1961 \$	1962 \$
St. Lawrence (Canadian Funds)	7,153,842	8,078,448	8,908,561
St. Lawrence (U.S. Funds)	2,955,217	3,328,612	3,666,214
Welland	1,318,357	1,460,451	640,193(1)
TOTAL	11,427,416	12,867,511	12,574,775(1)

(1) Tolls suspended on the Welland Canal as of July 18th, 1962.

OPERATION

Navigation Season

The navigation season on the St. Lawrence River canals normally extends from the middle of April to the end of November and on the Welland Canal from the first of April to the middle of December. During this period Seaway structures are operated 24 hours a day, 7 days a week.

Navigation through the Canadian locks on the St. Lawrence River section opened on schedule with favourable weather conditions. However, through navigation was not possible until April 23 due to a crack in a sill at the Eisenhower Lock. Also, due to ice cover on Lake St. Louis the placing of lighted aids to navigation was delayed until April 23 and therefore navigation

through Lake St. Louis was permitted only during daylight hours up to that date. Due to favourable weather conditions, the St. Lawrence section remained open for several days on a day to day basis after the official closing date of November 30. This permitted 28 inland vessels to clear Iroquois Lock upbound and 18 ocean and 15 inland vessels to clear St. Lambert Lock downbound. The last vessel cleared St. Lambert Lock, December 7. The Welland Canal opened for vessel movement on April 1 as scheduled and closed to navigation on December 15 with the last vessel clearing on December 16.

The Canadian Sault Ste. Marie Canal opened for vessel movement on April 4 and was closed to navigation on December 12.

Training

During the non-navigation season briefing schools were conducted at Cornwall Headquarters and on the Welland Canal for despatchers, lockmasters and operators, at which the various phases of the operations affecting each respective group were carefully reviewed.

The despatchers are impressed with the need for safety, efficiency, courtesy and the use of correct radio-telephone procedures and terminologies, in addition to the transmission of correct and concise despatch information to vessel masters is emphasized throughout the course. Due to the increasing crowding of the air waves it has been stressed to Seaway employees and shipping that only essential messages be transmitted to or from Seaway Despatch Stations.

Lockmasters and operators are instructed in safe and efficient methods of handling vessels, the function of vessel mooring equipment, interpretation of nautical terms and the meaning and application of Seaway Regulations. As a result of the success of the briefing schools to date and the related improvements in operation during the navigation season, it is intended that they be further expanded in 1963.

Vessel Inspections

During the year plans of many vessels were submitted for examination to ensure that Seaway requirements with respect to such items as mooring equipment, landing booms and fenders have been met. In addition, an inspection program on vessel equipment required for Seaway transit was carried out on a 24 hours a day, 7 days a week basis. This service resulted in over 400 inspections during the navigation season.

Vessel Movements

As a result of the change in speed limits established at the opening of the season, there has been a gratifying improvement in the uniformity of speed of vessels using the system. There still appears to exist, however, an undue tendency for vessels to disregard regulations with respect to vessel movement particularly concerning draft restrictions and observance of "Limit of Approach" and "Stop" signs. Efforts to control such violations of the Regulations will be intensified during the 1963 season.

The use of V.H.F. (Very High Frequency) radio-telephone communication which had been strongly advocated since the opening of the Seaway in 1959 became mandatory for vessel despatch transmissions commencing with the opening of navigation in 1962.

Accidents and Delays

The majority of the delays to navigation were the result of adverse weather conditions such as high winds and fog. Bad weather caused the loss of 827 hours in 1962 as compared with 657 hours in 1961.

Equipment failures accounted for a total of 49 hours delay (17 hours of which were on the Welland Canal). This compares with a total of 125 hours delay (94 hours of which were on the Welland Canal) recorded for 1961.

The following table is given to indicate the type of accident in which vessels were involved:

Type of Accident	No. of Vessels Involved
Collision (9 accidents)	18
Vessels colliding with bridges	13
Vessels striking fender booms at locks	4
Vessels striking lock and approach walls	18
Vessels striking breast walls	3
Groundings (Vessels outside channel limits)	9
	—
TOTAL	65

On the St. Lawrence section, 26 vessels were involved in accidents resulting in approximately 7 hours of delay and on the Welland there was a total of 39 vessel accidents resulting in 38 hours of delay. A breakdown of these statistics shows that on the Welland Canal less than 3 inland vessels per 1000 passages were involved in accidents which is similar to the ratio for the previous year. However, the number of ocean vessels involved in accidents shows a slight increase to 13 per thousand in 1962 when compared to 11 in 1961.

Planting of Wind-breaks, Fencing

Some 3600 poplars and pines were planted on the rock dykes at St. Lambert and Cote Ste. Catherine Locks and 1000 poplar trees were planted along the Welland Canal. These trees will provide a windbreak for vessels transiting the system.

The program of protecting the public from the open lock chambers by the installation of security fencing continued on the Welland Canal with the erection of four-foot high fencing at Locks 2, 4, 6 and 8.

Improvements

Throughout the year new equipment was installed and hydraulic, mechanical and electrical tests were conducted in order to improve safety measures, increase operating efficiency and speed up vessel movements.

Emergency anchorage areas are being provided in the Beauharnois Canal by Hydro-Quebec. Additional mooring bollards were installed at Iroquois to assist vessels entering the lock; safety guards were installed on all vertical ladders in the valve wells at Beauharnois and bevel gears were replaced by spiral gears on the No. 3 fender at St. Lambert to increase the strength of the machinery.

The study of all structures on the Lachine Canal was continued and necessary improvements to various canal structures are planned. A program of modernizing and improving all lock machinery was initiated at Sault Ste. Marie with the rehabilitation of the gate machinery.

Maintenance

A complete program of preventive and corrective maintenance on all equipment, structures and machinery was carried out, including regular lubrication of all machinery parts and wire ropes for bridges, gates, valves and fenders; regular monthly electrical load readings on all machinery and graphic records were made giving the load time curve for each piece of equipment. During the winter a thorough inspection of all operating equipment, structures and machinery was made with particular

attention paid to those items that are inaccessible during the navigation season. In addition to Seaway structures, certain municipal facilities such as sewers, pumping stations and water intakes under the Authority's jurisdiction were maintained.

The sweeping program for proving channel depths was continued and minor dredging for the removal of high spots was carried out.

On the Non-Toll Canals the program of refacing the north lock wall at the Sault Ste. Marie Canal was completed and the replanking of the lock floor was commenced. At Lock 15 on the Cornwall Canal steel sheet piling was driven to prevent bank erosion. On the Lachine Canal the walls at Locks 4 and 5 were grouted to eliminate leaks and voids.

Hydraulics

Water level gauging and flow measurements were carried out throughout the year to control the flow of water through the canals, prevent flooding and maintain an adequate supply of water for navigation purposes, power generation, municipal water supplies and other leased water rights.

ENGINEERING

"S.L.S. Hercules"

As forecast in the 1961 Annual Report, construction of the 275-ton capacity self-propelled floating revolving crane and gate lifter was completed in the autumn. The Authority took delivery of the vessel in early December after a final test at the Cote Ste. Catherine Lock, during which a 240-ton operating gate was lifted out of its bearings, and the spare gate installed in its place.

This dual purpose, fully revolving crane is believed to be the largest of its type ever built in the Western Hemisphere and is highly manoeuvrable. With its two Voith-Schneider cycloidal propellers the vessel can move in any direction or rotate about its centre. Accommodation for crew and day-workers is installed.

In addition to its prime duty of servicing the Seaway the crane will be available for handling heavy cargo lifts in the Port of Montreal.

North Channel Span — Seaway International Bridge

The North Channel bridge which links Cornwall and Cornwall Island was completed for official opening July 3. It is 5,330 feet in length with an overhead clearance of 120 feet. It provides a 27-foot roadway and a walkway. A system of approaches connects the Cornwall end of it with local streets and highways.

Land Acquired for Twinning Welland Locks

In May the Authority acquired 320 acres of land along the Welland Canal necessary for the twinning of Locks 1, 2, 3 and 7. General planning has been continuing steadily for the future twinning of these locks. Locks 4, 5 and 6 of the Welland Canal are twinned.



Air view of locks and canal by day: Locks 4, 5 and 6 of the Welland Canal are twinned and in flight, permitting simultaneous upbound and downbound lockages.

Landscaping

The past year has seen the continuance of a clean-up program at the several lock areas and at the Cornwall International Bridge. The initial phase at St. Lambert was virtually completed and the work at Cote Ste. Catherine was well advanced before the winter brought a halt to operations. At the lower Beauharnois Lock a start was made. At the approach to the Cornwall North Channel bridge the first stage was virtually completed. Further work was done in connection with the rehabilitation of a former spoil area on Cornwall Island.

Extension of the Upper Entrance Wall of the Upper Beauharnois Lock

Work on the construction of a 490 foot extension to the existing entrance wall, commenced in the late fall of

1961, was completed in June of this year. A noticeable improvement in navigation conditions at this point has resulted.

Timber Fenders on Lock Entrance Walls

The program of installing timber and butyl rubber fenders on the faces of the various lock entrance walls, begun in 1959, was continued. Fenders at Lock 8 and additional fenders at Locks 1, 2 and 3 and at the Guard Gate on the Welland Canal were completed early in 1962. Fenders are being installed during the winter of 1962-63 at the Iroquois Lock and on the northwest entrance wall at Lock 8 on the Welland Canal.

This will complete the installation of hardwood fenders along all entrance walls at the major locks on the Seaway.

Modification of Counterweight Sheaves in Vertical Lift Bridges

Extensive research was undertaken into the cause of the cracks appearing in the counterweight sheaves of the vertical lift bridges in the Eastern and Central Districts. Temporary repairs to the St. Louis and Valleyfield bridges undertaken in the winter of 1961-62 proved ineffective. As a result, new cast steel hubs were designed and fabricated, and the railway bridges at Caughnawaga have now been fitted with these hubs. New hubs are in process of installation in the St. Louis and Valleyfield bridges. At St. Lambert, where the overstressing of the original design was not as severe, new hubs have been ordered and will be stored for later installation.

Channel Improvement and Slope Stabilization between Locks 3 and 4, Welland Canal

A contract involving the excavation of 500,000 cubic yards of clay and rock was awarded in October to improve the canal between Locks 3 and 4. At the end of the year about a quarter of the excavation had been completed. The work is scheduled for completion before the opening of navigation in the spring of 1963.

Improvement of Unwatering Facilities at Twin Locks 4, Welland Canal

On two occasions in the past 3 years unsuccessful attempts were made to unwater one of the locks at Twin Locks 4 to carry out emergency repairs. On both occasions the old timber unwatering gates were found to be ineffective and the entire reach to Lock 3 had to be drained, thus stopping all canal traffic.

As a result, it was decided to remove the old gates and instead make provision for stop logs, with a derrick capable of placing them in either the east or west lock entrance, as required. High capacity pumps will be provided for quickly unwatering either lock, the unaffected lock remaining available for the maintenance of canal traffic.

This work was started after the close of navigation this year, and is proceeding during the winter, being scheduled for completion in the spring of 1963.

Modification of Mitre Gate Sills, Welland Canal

Substitution of permanent steel and concrete sills for the former wooden sills continued from 1961 and was completed in the spring of 1962.

Mitring Guides for Lock Gates, Welland Canal

As originally constructed, the mitre gates on the Welland Canal did not always mitre accurately, though water pressure on the gates forced them to seal at the wooden sills. With the installation of the improved permanent sills, a seal was not always obtained, and a more accurate guide was necessary to ensure correct mitring. Such a guide was designed and all gates were equipped with the device during the year.

Pondage above Lock 7, Welland Canal and Reclamation of Marlatt's Pond

A contract was let in December 1961 for excavation to increase the pondage area above Lock 7, and material so excavated was used to fill in part of the swampy area known as Marlatt's Pond. This was done during the winter of 1961-62. Subsequently it was considered desirable to complete the reclamation of the area, and a second contract was let in the fall of 1962 for additional fill to be excavated for this purpose from the Lock 7 pondage area.

Hydraulic Investigation and Tests to Improve Lock Operations

The program of testing and research, instituted in 1960, to ascertain methods of improving the efficiency of lock operation was continued and intensified during 1962. A semi-automatic system of push button control of the locking operations was placed in service at the St. Lambert Lock in June and at Lock 7 of the Welland Canal in September. This system ensures a uniform sequence of operation of valves at the established optimum for efficiency. Improvements to Lock 7 have made it possible to decrease the filling time from 15 minutes to 12 minutes. Further reductions of filling times for all Welland locks are being studied. Investigations are also being made into possible improvements in valve design on the Welland Canal, and research to reduce surge effects in the canal reaches is being carried on.

Rehabilitation of Bridge across the Welland River at Chippewa

The bascule bridge across the Welland River at Chippewa had not been operated as a movable bridge for over 20 years. Much of the machinery had been

removed, and the remaining shafting, pinions etc. were in a rusted and seized condition. Corrosion had weakened the bridge and repairs were imperative. Accordingly a two stage program was instituted, involving the removal of the machinery and machinery house, the counterweight and all unnecessary members and conversion to a fixed span. The first stage was undertaken as a winter work program during the winter of 1961-62, and the second stage is underway during the winter of 1962-63.

Rehabilitation of Bridges — Lachine Canal

The program of major repairs and modifications made necessary by the wear and corrosion on the bridges across the Lachine Canal is continuing. The rehabilitation of the Charlevoix Street Bridge, (No. 4) was completed during the year, and a contract was let for extensive repairs to Black's Bridge, (No. 1). Work on the latter is scheduled for completion in April, 1963.

Extension to the Collector Sewer to Service St. Hubert, Brossard and Notre Dame

A contract was let for an extension of the existing 78" collector sewer from a point in Preville some 6,000 feet westerly to a point in the Town of Brossard, where connection has been made with the 72" St. Hubert Sewer. Work commenced early in the summer and was virtually completed by year's end. The collector sewer will then serve 10 municipalities on the South Shore from Longueuil to the limits of the Town of Laprairie.

Settlement of Outstanding Claims

As of January 1, 1962 eight contractor's claims relative to the St. Lawrence Seaway construction were still outstanding. During the year settlement was reached on all but one. In this case both the recommendation of the Authority and a later recommendation by the Seaway Claims Advisory Committee set up by the Treasury Board have been refused by the Contractor, who has now placed his case in the hands of counsel.

ADMINISTRATION

The organization pattern of the Authority was revised during 1962 and a more progressive type adopted, better suited to the Authority's activities. The plan introduced was a line and staff type of organization that has improved lines of communication between the Authority and its principal line officers responsible for the daily activities of the Seaway in each region.

It has clarified the position of staff officers and provided more freedom with respect to advising the Authority and the line officers on matters related to their specialized field of activity.

The principal line officers reporting to the Authority are the three Regional Managers.

The Eastern Region extends from the Seaway entrance at Montreal to the Western end of Lake St. Louis and

the headquarters are at St. Lambert, Quebec. The South Shore Canal with two locks, on the main Seaway route, and the Lachine Canal are in this region.

The Central Region extends on the Canadian side from the western end of Lake St. Louis to and including Iroquois Lock and Canal. It also includes the Beauhar- nois Canal with its two locks, the channel in Lake St. Francis, and the portion of the Cornwall Canal which still remains in service. The Headquarters are at Corn- wall, Ontario.

The Western Region is chiefly concerned with the Welland Canal. It also includes the Canadian lock and canal at Sault Ste. Marie, Ontario. The headquarters are at St. Catharines, Ontario.



The Authority's self-propelled, floating, revolving gatelifter crane, S.L.S. "Hercules" lifts a 250-ton gate-leaf at Cote Ste. Catherine Lock.

PERSONNEL

A complete analysis of the welfare plan of the Authority was carried out in 1962. This resulted in increased benefits under the hospital-medical-surgical portion of the plan at a relatively low additional cost, and an improved graduated scale of life insurance was designed to provide more adequate coverage. The plan now provides for coverage for retired employees as well as widows in receipt of superannuation pensions.

As of December 31, 1962 total personnel numbered 1328.

PURCHASING AND STORES

Improved warehouse procedures were developed and the staff was re-organized whereby designated responsibilities were assigned to each position. A surplus disposal program continued and during the year material with an original value of approximately \$400,000 was declared surplus to requirements through Crown Assets Disposal Corporation. Purchases to the value of some \$2,000,000 a year are made by the Authority.

TOLLS AND STATISTICS

The Authority collects tolls on behalf of itself and the Saint Lawrence Seaway Development Corporation of the United States and provides the United States entity with its appropriate proportion.

No major revisions were made in the toll assessments procedure during the year. A small number of commodity re-classifications were made. These had been referred to the Tolls Advisory Board for decision. In-transit cargo upbound was classified for the season as ballast and therefore toll-free.

The major change in toll assessments during the navigation season was the suspension of tolls on the Welland Canal by Order-in-Council 1962-1032, effective July 18, 1962. This suspension occasioned minor adjustments in procedures and a small reduction in the number of invoices issued since the majority of vessels transit both the St. Lawrence and Welland. During the navigation season regular monthly traffic statistics are published and a full traffic report is made annually.

PUBLIC INFORMATION AND CEREMONIES

The Authority provides a variety of information services—to users, to the press, Government departments and public bodies by means of releases and announcements and to specific inquirers, both public and private, in Canada and abroad.

Co-operation is extended and organizational work done in conjunction with various departments and organizations, in connection with special visits and in regard to public ceremonies in which the Seaway is involved.

Among the events of 1962 was the visit of Her Majesty the Queen Mother Elizabeth to Canada in July, during which, aboard the Royal Canadian Navy frigate H.M.C.S. "Inch Arran", she travelled through a portion of the Seaway.

Over 4,000 requests for public information were answered in 1962. To most inquirers a kit of information is provided, but many require considerable research and the preparation of special articles in a number of cases.

The place of the Seaway in the life of the country receives continuing recognition by educational authorities and inquiries from students, teachers and university instructors, both in and outside Canada are answered fully and promptly.

The St. Lawrence Seaway Masters' Handbook, the St. Lawrence Seaway Traffic Report and this report are prepared by Authority staff. The first two are published in conjunction with the United States entity, the Saint Lawrence Seaway Development Corporation.

BRIDGE DIVISION

When the construction of the St. Lawrence Seaway was undertaken in 1954, the Cornwall International Bridge Company, Limited, a share-capital company incorporated under the Dominion Companies Act, was operating an international toll bridge for vehicular and pedestrian traffic across the St. Lawrence River between Cornwall, Ontario, and Rooseveltown, New York. The Company was occupying, under a lease, the north and south channel low-level spans of the New York Central railway bridge. These installations were acquired from the railway company by The St. Lawrence Seaway Authority and the Saint Lawrence Seaway Development Corporation (a United States Government Corporation) in connection with Seaway navigational requirements. In this way, the Seaway entities became lessors of the Bridge Company.

All of the outstanding shares of the Cornwall International Bridge Company, Limited, were purchased jointly by the Saint Lawrence Seaway Development Corporation of the United States and The St. Lawrence Seaway Authority of Canada in 1957, and subsequently, the Seaway entities have operated and managed the international bridge between Cornwall, Ontario and Rooseveltown, New York, through the agency of this Company.

This international bridge operation now utilizes new facilities constructed by the Seaway entities. The low-level railway bridge between Rooseveltown and Cornwall Island was replaced with a new high level South Channel Span in 1958, and the railway bridge, containing the swing span between Cornwall and Cornwall Island, was replaced with a new high level North Channel Span in 1962.

In June of 1962, the Seaway entities agreed to discontinue the toll bridge operation through the agency of the company and to assign this operation to a subsidiary of the Authority. Pending incorporation of this subsidiary, the interim operation was assigned to The St. Lawrence Seaway Authority, Bridge Division, for operation on behalf of the two entities and on the same terms as previously. The operation of this international toll bridge will be transferred to The Seaway International Bridge Corporation, Ltd., on January 1, 1963. The financial statements for the period July 3, 1962 to December 31, 1962, are detailed elsewhere in this report.

Upon completion of the construction of the new North Channel Span, official ceremonies were carried out formally to open this international crossing on July 3, 1962.

FINANCIAL SECTION

The Authority's Balance Sheet as at December 31, 1962 and Statement of Income and Expenditure for the year ended on that date, as reported upon by the Auditor General, is appended to this report.

A statement of sources of funds and their utilization for the year 1962 and for the period from the commencement of Seaway construction to 31st December 1962 follows:

(in millions of \$)		
	Year 1962	Cumulative 1st August 1954 to 31st December 1962
Source of Funds		
Loans and other indebtedness		
Loans under Sec. 25 of the Act	\$ 6.5	\$334.5
Interest deferred	15.7	49.4
	22.2	383.9
Proceeds from disposals and other realizations on capital assets . . . . .	.1	.8
Provision for replacement of capital assets . . . . .	.9	3.6
Miscellaneous	—	.2
	<u>\$23.2</u>	<u>\$388.5</u>
Utilization of Funds		
Capital Assets — gross additions		
Cost of construction or acquisition	\$ 7.7	\$330.7
Interest during construction . . . . .	.2	17.5
	7.9	348.2
Expenditures in connection with future planning (Welland) . . . . .	.4	.8
Net loss	13.1	37.9
	21.4	386.9
Increase in net current assets	1.8	1.6
	<u>\$23.2</u>	<u>\$388.5</u>

	(in millions of \$)			Other Assets	Accumulated Deficit	Total Debt
	Gross	Reserves	Net			
St. Lawrence River Section	\$305.4	\$2.0	\$303.4	\$1.7	\$23.6	\$328.7
Welland Canal Section	33.3	1.3	32.0	.5	14.2	46.7
Cornwall North Channel Bridge	8.4	—	8.4	—	.1	8.5
	<u>\$347.1</u>	<u>\$3.3</u>	<u>\$343.8</u>	<u>\$2.2</u>	<u>\$37.9</u>	<u>\$383.9</u>

Order in Council P.C. 1961-1863 provides for the repayment of principal amount of loans under Sec. 25 of the Act together with interest now accrued or accruing up to December 1963 in forty-six equal annual instalments, including current interest thereon, during the years 1964-2009 inclusive.

Capital Expenditures

During 1962 Expenditures for the acquisition or construction of capital assets amounted to \$7.9 million. Major expenditures were \$1.9 million on the floating crane, SLS "Hercules", \$1.5 million on the Cornwall North Channel Bridge, \$3.4 million on construction and improvements to the St. Lawrence River Section of the Seaway and \$1.1 million on improvements in the Welland Section.

Prior to 1962 it had been Authority policy to make annual provision for the replacement of movable equipment having a life of less than fifty years. During 1962 this policy was reviewed and it was decided that provision should also be made for the renewal of machinery and equipment incorporated in structures (e.g. locks and bridges) in both the St. Lawrence and Welland Sections. For the year 1962 this resulted in an increase of approximately \$675,000 in the amount of the Provision for Replacement. Corresponding adjustments were also made with respect to the provisions that had been made for the years 1959-1961 inclusive.

St. Lawrence River Section

The Authority assesses and collects toll revenues accruing to the Saint Lawrence Seaway Development Corporation as well as to itself. During the year 1962 the tolls assessed on behalf of the Development Corporation amounted to U.S. \$3,667,000 (1961 — U.S. \$3,331,000).

The tolls assessed by the Authority on its own behalf amounted to \$8,914,000 in Canadian currency (1961 — \$8,086,000 Can.).

Borrowings

Under the terms of the St. Lawrence Seaway Authority Act as amended on 28th February 1962 the limit of the Authority's borrowing power was increased from \$335 to \$345 million.

At 31st December 1962, as shown in the statement above, the Authority's debt (borrowings plus deferred interest) aggregated \$383.9 million which is allocated as follows:

The following table highlights the operations of the St. Lawrence River Section since its opening in 1959:

	(in millions)			
	Year ending December 31			
	1959 (nine months)	1960	1961	1962
Cargo tons	<u>20.6</u>	<u>20.3</u>	<u>23.4</u>	<u>25.6</u>
Revenue — Tolls	\$ 7.1	\$ 7.2	\$ 8.1	\$ 8.9
— Miscellaneous . . . . .	.3	.1	.1	.2
Operating, maintenance and share of administrative expenses	1.4	2.1	2.3	2.9
Replacement provision . . . .	.3	.4	.5	.5
Net operating profit	5.7	4.8	5.4	5.7
Interest	7.4	11.5	12.7	13.6
Loss for year	(1.7)	(6.7)	(7.3)	(7.9)
Accumulated deficit	(1.7)	(8.4)	(15.7)	(23.6)

Welland Section

Highlights of Welland Canal operations since 1959 are tabulated below:

	(in millions)			
	Year ending December 31			
	1959 (nine months)	1960	1961	1962
Cargo tons	<u>27.5</u>	<u>29.2</u>	<u>31.5</u>	<u>35.4</u>
Revenue — Tolls	\$ 1.2	\$ 1.3	\$ 1.5	\$.6
— Miscellaneous . . . . .	.6	.7	.7	.8
Operating, maintenance and share of administrative expenses	2.4	3.8	4.5	4.4
Replacement provision . . . .	.2	.3	.4	.4
Net operating loss	(.8)	(2.1)	(2.7)	(3.4)
Interest . . . . .	.7	1.2	1.5	1.8
Loss for year	(1.5)	(3.3)	(4.2)	(5.2)
Accumulated deficit	(1.5)	(4.8)	(9.0)	(14.2)

Ottawa, March 29, 1963.

THE HONOURABLE LEON BALZER,
MINISTER OF TRANSPORT,
OTTAWA.

Sir,

I have examined the accounts and the following financial statements of The St. Lawrence Seaway Authority for the year ended December 31, 1962:

Balance Sheet

Statement of Income and Expense for the year ended December 31, 1962

Cornwall-Roosevelt International Bridge

Statement of Operations for the period July 3 to December 31, 1962 Schedule A

Statement of Expense for the year ended December 31, 1962 Schedule B

Statement of Deficit for the year ended December 31, 1962 Schedule C

Capital Assets as at December 31, 1962 Schedule D

Non-toll Canals

Statement of Expense, Income, Expenditures on Remedial Works, and
Capital Expenditures for the year ended December 31, 1962 Exhibit I

Section 25 of the St. Lawrence Seaway Authority Act provides that the Minister of Finance, with the approval of the Governor in Council, may from time to time make loans to the Authority. Section 13 of the Act, as amended, states that the aggregate of the amounts so borrowed under the Act and outstanding shall not at any time exceed \$345,000,000.

The accompanying balance sheet shows that the Authority was indebted to the Government of Canada on December 31, 1962 in respect of loans and deferred interest in the total amount of \$383,888,008, made up as follows:

Loans under section 25 of the Act	\$334,500,000
Interest to December 31, 1959—deferred	19,427,117
Interest for the year 1961—deferred	14,288,940
Interest for the year 1962—deferred	15,671,951
	<hr/>
	383,888,008
	<hr/>

Under the provision of section 16 of the St. Lawrence Seaway Authority Act, tolls are to be "designed to provide a revenue sufficient to defray the cost to the Authority of its operations", which costs are defined as including payments in respect of the interest on amounts borrowed by the Authority and amounts sufficient to amortize the principal of amounts so borrowed over a period not exceeding fifty years. The original conditions under which loans

were made to the Authority under section 25 of the Act required the payment only of interest in the first three full years of operation (through the year ending December 31, 1962) and thereafter payment of annual amounts sufficient to amortize over a period of forty-seven years (or by December 31, 2009) all loans and interest thereon. As pointed out in Balance Sheet Note No. 5, the terms of the Authority's financing arrangements were amended during 1961 and now call for repayment of all loans together with interest previously deferred and all other interest accrued or accruing up to December 31, 1963, together with current interest thereon, in forty-six equal annual instalments commencing December 31, 1964.

In accordance with these financial arrangements the year's operations have been charged with interest amounting to \$15,396,959 (an additional amount of \$274,992 was included in construction costs), but this interest has not been paid and is included in the balance sheet as part of the Proprietary Equity of the Government of Canada. There was no charge to the year's operations with respect to amortization of the principal of the amounts borrowed.

The costs of operating and maintaining the canals and works under the administration of the Authority are defined under paragraph (c) of section 16 as including all operating costs of the Authority and such reserves as may be approved by the Minister. The Authority is of the opinion that it is not necessary to include depreciation as an element of operating and maintenance cost and that the amortization over the fifty year period of the principal of the amounts borrowed together with interest as required by subsections (a) and (b) meets the requirements of the Act. Accordingly, no provision for depreciation has been included in the costs for the year under review.

Provision has been made during the year under review toward the cost of replacing machinery and equipment, including lock, bridge and building machinery and equipment, in the amount of \$2,710,283, of which \$1,821,729 was charged to the Deficit Account being additional provision required for the years 1959 to 1961, and \$888,554 was charged to expense in respect of the year ended December 31, 1962. The Reserve for Replacement of Machinery and Equipment as thus augmented amounted to \$3,342,878 at December 31, 1962.

No provision has been made in the accounts for the replacement of buildings, lock gates and lock and bridge structures. The Authority considers that these Seaway works can be maintained in working condition at all times under its maintenance programme.

With the opening to traffic of the new North Channel bridge on July 3, 1962 the Cornwall International Bridge Company Limited ceased operations and is in the process of winding up. The operating rights of the bridge company have been transferred to the Authority and certain of its fixed assets are in the process of being abandoned. Because the amount realized from the disposal of the remaining fixed assets is expected to be nominal in relation to the Authority's investment of \$200,000 in shares of the bridge company this amount has been written off as an investment and is now recorded as part of the cost of the St. Lawrence River section of the deep waterway.

In compliance with the requirements of section 87 of the Financial Administration Act, I report that, in my opinion, subject to the above observations:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statements of the Authority
 - (i) were prepared on a basis consistent with that of the preceding year, and are in agreement with the books of account,
 - (ii) in the case of the balance sheet, give a true and fair view of the state of the Authority's affairs as at the end of the financial year, and
 - (iii) in the case of the statement of income and expense, give a true and fair view of the income and expense of the Authority for the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

A. M. HENDERSON,
Auditor General of Canada.

THE ST. LAWRENCE

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Balance Sheet

(with comparative fig

ASSETS

	1962	1961
Current Assets:		
Cash	\$ 211,343	\$ 863,620
Treasury bills of Canada and short-term bank deposits	1,898,611	—
Accounts receivable (less provision for doubtful accounts)	622,324	499,289
Due from Government of Canada re non-toll canals (Exhibit I).	70,192	311,884
Inventories of materials, minor equipment and shop work in progress, at cost (less reserve for obsolescence)	675,718	855,941
Total Current Assets	3,478,188	2,530,734
Bonds and Cash held as Contractors' Security Deposits and Toll Guarantees (contra)	450,979	897,586
Deferred Cost of Planning and Acquisition of Land for future twinning of Welland Ship Canal Locks	846,122	466,762
Capital Assets: (Schedule D)		
Acquired by the Authority, at cost		
St. Lawrence River section	305,361,958	300,666,659
Welland Ship Canal improvements	33,253,684	32,288,395
Cornwall North Channel Bridge	8,443,350	7,029,079
	347,058,992	339,984,133
Entrusted to the Authority, at transfer values		
Welland Ship Canal (less disposals)	130,548,637	130,625,654
Non-toll canals and other properties,	49,766,478	49,784,050
	180,315,115	180,409,704
Total Capital Assets	527,374,107	520,393,837
	532,149,396	524,288,919

The appended notes form an integral part of this statement.

Certified correct:

J. M. MARTIN

Director of Finance and Accounting

Approved:

R. J. RANKIN

President

SEAWAY AUTHORITY

(under the Seaway Authority Act)

December 31, 1962

(at December 31, 1961)

LIABILITIES

	1962	1961
Current Liabilities:		
Accounts payable	1,588,141	2,022,432
Due to Saint Lawrence Seaway Development Corporation re tolls.	35,835	37,941
Contractors' holdbacks	294,581	837,214
Total Current Liabilities	1,918,557	2,897,587
Contractors' Security Deposits and Toll Guarantees (contra)	450,979	897,586
Reserve for Replacement of Machinery and Equipment	3,342,878	719,440
Proprietary Equity of the Government of Canada:		
Capital Assets entrusted to the Authority by the Governor in Council		
under section 14 of the Act	180,483,368	180,511,162
Loans under section 25 of the Act.	334,500,000	328,000,000
Interest on loans — payment deferred	49,388,008	33,716,057
Deduct: Deficit, per Statement of Deficit (Schedule C)	564,371,376	542,227,219
Net Equity	37,934,394	22,452,913
	526,436,982	519,774,306
	532,149,396	524,288,919

I have examined the above Balance Sheet and the related Statement of Income and Expense and Statement of Deficit and have reported thereon under date of March 29, 1963, to the Minister of Transport.

A. M. HENDERSON
Auditor General of Canada

THE ST. LAWRENCE SEAWAY AUTHORITY

Notes to Balance Sheet

1. Outstanding commitments under uncompleted contracts as at December 31, 1962 amounted to approximately \$1,600,000.
2. One claim for additional compensation of \$188,000, received from a contractor in respect of a completed contract, remained unsettled at December 31, 1962. The Authority's offer of \$36,000 in settlement, made with the approval of Treasury Board, has been rejected by the contractor who has filed an action against the Authority claiming \$254,000 and interest.
3. The liability of the Authority with respect to compensation for properties under expropriation at December 31, 1962 is estimated by the Authority as amounting to \$1,400,000.
4. Costs of track diversion and re-arrangement of the approaches to the Victoria Jubilee Bridge amounting to \$11,752,504, which were incurred by the Canadian National Railways are, in the opinion of an independent legal adviser, the responsibility of the Authority. This amount may be paid only with the approval of the Governor in Council after Parliament makes provision for the necessary funds.
5. In accordance with the provisions of Order in Council P.C.1961-1863 of December 29, 1961 the principal amount of loans received under section 25 of the St. Lawrence Seaway Authority Act to finance construction of the Seaway, together with interest previously deferred and all other interest now accrued or accruing up to December 31, 1963, is to be repaid, together with current interest thereon, in forty-six equal annual instalments commencing December 31, 1964.
6. The Reserve for Replacement of Machinery and Equipment amounting to \$3,342,878 at December 31, 1962 represents the accumulated provision for replacement of assets which the Authority considers will require replacement. No provision has been made in the accounts for the replacement of buildings, lock gates, and lock and bridge structures. The Authority considers that these Seaway works can be maintained in working condition at all times under its maintenance programme.

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Income and Expense for the year ended December 31, 1962

(with comparative figures for the year ended
December 31, 1961)

	<u>1962</u>	<u>1961</u>
Income		
Tolls assessed	\$ 9,555,641	\$ 9,548,303
Rentals	612,598	593,699
Wharfage	177,668	150,550
Net income from operation of Cornwall-Roosevelt International Bridge (Schedule A)	121,107	—
Miscellaneous	224,908	154,704
	<u>10,691,922</u>	<u>10,447,256</u>
Expense (Schedule B)		
Operating expense	2,591,567	2,602,597
Maintenance expense	2,087,219	1,727,616
Operating and maintenance supervision	1,232,498	1,071,183
Administrative expense	1,759,721	1,616,737
	<u>7,671,005</u>	<u>7,018,133</u>
Less: Portion of supervision and administrative expense applicable to non-toll canals	324,432	288,285
	<u>7,346,573</u>	<u>6,729,848</u>
Net operating income before providing for interest and for replacement of machinery and equipment	<u>3,345,349</u>	<u>3,717,408</u>
Interest on loans from Government of Canada (not including \$274,992 added to construction costs)	15,396,959	13,792,739
Interest on contractors' claims and other accounts	163,848	—
Provision for replacement of machinery and equipment	888,554	200,565
	<u>16,449,361</u>	<u>13,993,304</u>
Net loss for the year	<u>13,104,012</u>	<u>10,275,896</u>

NOTE: Tolls for the transit of the Welland Canal were suspended on July 18, 1962 as directed by the Governor in Council (P.C. 1962-1032) on that date.

THE ST. LAWRENCE SEAWAY AUTHORITY
CORNWALL-ROOSEVELTOWN INTERNATIONAL BRIDGE

*Statement of Operations for the period July 3
to December 31, 1962*

Income		
Tolls		\$226,042
Interest		1,596
		<hr/> 227,638
Operating expense		
Salaries and wages	\$30,971	
Maintenance and repairs	29,683	
Advertising and publicity services	12,549	
Rental of toll collection machines	6,643	
Electricity and fuel oil	5,878	
Provision for depreciation	4,419	
Grant in lieu of municipal taxes	4,258	
Employee benefits	3,841	
Insurance	1,651	
Miscellaneous	6,638	
		<hr/> 106,531
Excess of income over operating expense transferred to Statement of Income and		
Expense		<hr/> <hr/> 121,107

NOTE: On July 3, 1962, The St. Lawrence Seaway Authority took over the operation of the Cornwall-Roosevelt International toll bridge from the Cornwall International Bridge Company Limited which is in the process of winding up its affairs. As of January 1, 1963, the Seaway International Bridge Corporation, Ltd., a wholly owned subsidiary of the Authority, took over the operation of the toll bridge.

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Expense for the year ended December 31, 1962

(with comparative figures for the year ended
December 31, 1961)

	1962	1961
Operating expense:		
Channels, canals and locks	\$1,611,288	\$1,684,172
Bridges	512,161	511,040
Grants in lieu of municipal taxes	360,374	353,142
Miscellaneous	107,744	54,243
	<u>2,591,567</u>	<u>2,602,597</u>
Maintenance expense:		
Channels, canals and locks	1,149,710	768,373
Bridges and tunnel	564,159	527,088
Canal lands and roads	166,116	140,103
Power transmission lines and canal lighting	84,288	85,669
Dredging and aids to navigation	61,919	99,476
Minor equipment	51,004	58,267
Miscellaneous	10,023	48,640
	<u>2,087,219</u>	<u>1,727,616</u>
Operating and maintenance supervision:		
Salaries	1,037,391	899,631
Travel	45,326	31,053
Engineering services	30,339	45,451
Office expenses	27,010	37,538
Miscellaneous	92,432	57,510
	<u>1,232,498</u>	<u>1,071,183</u>
Administrative expense:		
Salaries of members and executive officers	109,240	105,657
Other salaries	817,508	719,210
Employee benefits	544,480	503,956
Office expenses	64,069	37,836
Communications	41,362	38,702
Travel and removal	37,841	31,429
Office accommodation	34,384	69,177
Rental of office machines	29,052	22,344
Grants in lieu of municipal taxes	30,515	25,234
Provision for doubtful accounts	11,418	—
Public liability and property damage claims	7,919	40,109
Miscellaneous	31,933	23,083
	<u>1,759,721</u>	<u>1,616,737</u>
Total expense	<u><u>7,671,005</u></u>	<u><u>7,018,133</u></u>

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Deficit for the year ended December 31, 1962

Deficit as at January 1, 1962		\$22,452,913
Deduct:		
Grants in lieu of municipal taxes for the years 1959, 1960, and 1961, transferred to non-toll canals		74,281
		<hr/> 22,378,632
Add:		
Interest on contractors' claims charged to capital assets in 1961 now recorded as interest expense	\$ 425,715	
Adjustment in prior years' distribution of interest on loans from the Government of Canada as between construction and operating accounts . . .	16,780	
Major bridge repairs treated as capital expenditures in 1961, now charged to expense	187,526	
Provision with respect to 1959, 1960, and 1961, for replacement of lock, bridge, and building machinery and equipment	1,821,729	
Net loss for the year per Statement of Income and Expense	<hr/> 13,104,012	
		<hr/> 15,555,762
Deficit as at December 31, 1962		<hr/> <hr/> 37,934,394

THE ST. LAWRENCE SEAWAY AUTHORITY

Capital Assets as at December 31, 1962
(with comparative figures as at December 31, 1961)

	Acquired by the Authority			Entrusted to the Authority			Totals	
	St. Lawrence River Section	Welland Ship Canal	North Channel Bridge	Total	Welland Ship Canal	Non-toll canals	1962	1961
Land	\$ 8,190,342	\$	\$ 419,998	\$ 8,610,340	\$ 1,924,491	\$	\$ 10,534,831	\$ 10,211,736
Buildings	1,729,954	3,300	893,627	2,626,881	3,522,055		6,148,936	5,570,179
Channels and Canals	116,651,737	27,313,243		143,964,980	36,435,591		180,400,571	177,962,022
Locks	114,707,946	4,895,783		119,603,729	78,945,259		198,548,988	197,490,851
Bridges	25,310,660	142,143	7,129,725	32,582,528	8,340,872		40,923,400	35,728,911
Gatelifters	2,472,111			2,472,111	772,220		3,244,331	772,220
Movable equipment — including shore, floating, shop and other equipment	1,442,122	329,449		1,771,571	608,149		2,379,720	2,348,897
Works under construction	855,048	562,727		1,417,775			1,417,775	7,034,135
Non-toll canals and other pro- perties at Lachine, Cornwall, Sault Ste. Marie and Niagara Peninsula						49,766,478	49,766,478	49,784,050
	271,359,920	33,246,645	8,443,350	313,049,915	130,548,637	49,766,478	493,365,030	486,903,001
Remedial Works — expenditures on property owned by others	34,002,038	7,039		34,009,077			34,009,077	33,490,836
	305,361,958	33,253,684	8,443,350	347,058,992	130,548,637	49,766,478	527,374,107	520,393,837

THE ST. LAWRENCE SEAWAY AUTHORITY

NON-TOLL CANALS

*Statement of Expense, Income, Expenditures on
Remedial Works, and Capital Expenditures
for the year ended December 31, 1962*

(with comparative figures for the year ended
December 31, 1961)

	<u>1962</u>	<u>1961</u>
Expense		
Operating expense:		
Channels, canals and locks	\$ 326,323	\$ 345,242
Bridges	59,149	110,001
Grants in lieu of municipal taxes	699,894	128,399
	<u>1,085,366</u>	<u>583,642</u>
Maintenance expense:		
Channels, canals and locks	325,332	426,819
Canal lands and roads	176,434	77,635
Bridges	297,136	72,817
Equipment	5,647	35,302
Power transmission lines and canal lighting	20,209	20,659
Wharves and docks	8,522	15,141
Miscellaneous	106,654	101,198
	<u>939,934</u>	<u>749,571</u>
Operating and maintenance supervision	181,283	203,851
Supervision and administrative expense (portion applicable to non-toll canals)	324,432	288,285
Employee benefits	106,717	110,974
Total expense	<u>2,637,732</u>	<u>1,936,323</u>
Income		
Rentals	304,537	310,904
Wharfage	68,674	87,521
Refund of previous years' expenditures	—	110,655
Miscellaneous	4,320	6,638
Total income	<u>377,531</u>	<u>515,718</u>
Operating deficit	2,260,201	1,420,605
Remedial works — Municipal properties	—	72,128
Capital expenditures:		
Construction of works	59,252	307,991
Acquisition of equipment	16,214	10,192
	<u>75,466</u>	<u>318,183</u>
Net expenditures	<u>2,335,667</u>	<u>1,810,916</u>
Recovered from:		
Department of Transport 1961-62 appropriations, Votes 452, 594 and 666	1,066,148	
Department of Transport 1962-63 appropriations, Votes 230 and 230A	1,199,327	
	<u>2,265,475</u>	
Balance to be recovered from Department of Transport	70,192	
	<u>2,335,667</u>	

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

CANAUX NON SOUMIS AU PÉAGE

Etat des dépenses, des recettes, des dépenses pour ouvrages de protection et des dépenses en immobilisations pour l'année terminée le 31 décembre 1962

(avec chiffres comparatifs pour l'année terminée le 31 décembre 1961)

	1962	1961
Dépenses		
Frais d'exploitation :		
Chenaux, canaux et écluses	\$ 326,323	\$ 345,242
Ponts	59,149	110,001
Subventions tenant lieu d'impôts municipaux	699,894	128,399
Frais d'entretien :	1,085,366	583,642
Chenaux, canaux et écluses	325,332	426,819
Terrains et routes de canal	176,434	77,635
Ponts	297,136	72,817
Matériel	5,647	35,302
Lignes de transmission d'énergie et éclairage des canaux	20,209	20,659
Quais et bassins	8,522	15,141
Divers	106,654	101,198
Surveillance de l'exploitation et de l'entretien	939,934	749,571
Frais de surveillance et d'administration (partie applicable aux canaux non soumis au péage)	181,283	203,851
Prestations aux employés	324,432	288,285
Total des dépenses	2,637,732	1,936,323
Recettes		
Loyers	304,537	310,904
Droit d'accostage et de terre plein	68,674	87,521
Remboursements des dépenses des années précédentes	—	110,655
Divers	4,320	6,638
Total des recettes	377,531	515,718
Déficit d'exploitation	2,260,201	1,420,605
Ouvrages de protection — Biens municipaux	—	72,128
Dépenses en immobilisations :		
Construction d'ouvrages	59,252	307,991
Acquisition de matériel	16,214	10,192
Dépenses nettes	75,466	318,183
Récupéré sur :		
Crédits du ministère des Transports pour 1961-1962 — nos 452, 594 et 666	1,066,148	1,199,327
Crédits du ministère des Transports pour 1962-1963 — nos 230 et 230A	2,265,475	70,192
Solde à récupérer du ministère des Transports	2,335,667	2,335,667

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

Immobilisations au 31 décembre 1962

(avec chiffres comparatifs au 31 décembre 1961)

	Acquis par l'Administration			Confées à l'Administration			Totaux	
	Section du fleuve Saint-Laurent	Canal maritime de Welland	Pont du chenal nord	Total	Canal maritime de Welland	Canaux non soumis au péage	1962	1961
Terrain	\$ 8,190,342	\$	419,998	\$ 8,610,340	\$ 1,924,491	\$	10,534,831	\$ 10,211,763
Bâtiments	1,729,954	3,300	893,627	2,626,881	3,522,055		6,148,936	5,570,179
Chenaux et canaux	116,651,737	27,313,243		143,964,980	36,435,591		180,400,571	177,962,022
Écluses	114,707,946	4,895,783		119,603,729	78,945,259		198,548,988	197,490,851
Ponts	25,310,660	142,143	7,129,725	32,583,528	8,340,872		40,923,400	35,728,911
Lève-portes	2,472,111			2,472,111	772,220		3,244,331	772,220
Matériel non durable — y compris le matériel riverain flottant, d'atelier et autre								
	1,442,122	329,449		1,771,571	608,149		2,379,720	2,348,897
Ouvrages en construction	855,048	562,727		1,417,775			1,417,775	7,034,135
Canaux non soumis au péage et autres biens à Lachine, Cornwall, Sault-Sainte-Marie et dans la péninsule du Niagara								
	271,359,920	33,246,645	8,443,350	313,049,915	130,548,637	49,766,478	49,766,478	49,784,050
Ouvrages de protection — dépenses sur des biens appartenant à d'autres								
	34,002,038	7,039		34,009,077			34,009,077	33,490,836
	305,361,958	33,253,684	8,443,350	347,058,992	130,548,637	49,766,478	527,374,107	520,393,837

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

État du déficit pour l'année terminée le 31 décembre 1962

Déficit au 1er janvier 1962	\$22,452,913
A déduire:	
Subventions tenant lieu d'impôts municipaux pour les années 1959, 1960 et 1961, cédées aux canaux non soumis au péage	74,281
A ajouter:	
Intérêts sur les réclamations des entrepreneurs, imputés sur les immobilisations en 1961 et inscrits maintenant comme frais d'intérêts	\$ 425,715
Redressement de la répartition, faite les années précédentes, des intérêts sur les emprunts du Gouvernement du Canada entre les comptes de construction et les comptes d'exploitation	16,780
Réparations de ponts importantes considérées comme immobilisations en 1961, maintenant imputées au compte des dépenses	187,526
Provision, à l'égard des années 1959, 1960 et 1961, pour le renouvellement des machines et du matériel des écluses, des ponts et des bâtiments	1,821,729
Perte nette de l'année selon l'état des recettes et des dépenses.	13,104,012
Déficit au 31 décembre 1962	15,555,762
	<u>37,934,394</u>

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

État des dépenses pour l'année terminée le 31 décembre 1962

(avec chiffres comparatifs pour l'année terminée le 31 décembre 1961)

1962	1961
Frais d'exploitation	
Chenaux, canaux et écluses	\$1,611,288
Ponts	512,161
Subventions tenant lieu d'impôts municipaux	360,374
Divers	107,744
	54,243
	2,591,567
Frais d'entretien	
Chenaux, canaux et écluses	1,149,710
Ponts et tunnel	564,159
Terrains et routes de canal	166,116
Lignes de transmission d'énergie et éclairage des canaux	84,288
Dragage et aides à la navigation	61,919
Matériel secondaire	51,004
Divers	10,023
	48,640
	2,087,219
Surveillance de l'exploitation et de l'entretien	
Traitements et salaires	1,037,391
Frais de voyage	45,326
Services techniques	30,339
Frais de bureau	27,010
Divers	92,432
	57,510
	1,071,183
Frais d'administration	
Traitements des membres et du personnel de direction	109,240
Autres traitements ou salaires	817,210
Prestations aux employés	544,480
Frais de bureau	64,069
Communications	41,362
Frais de voyage et de déménagement	37,841
Bureaux	34,384
Location de machines de bureau	29,052
Subventions tenant lieu d'impôts municipaux	30,515
Réserve pour créance douteuses	11,418
Réclamations—responsabilité vis-à-vis du public et dommages à la propriété	7,919
Divers	31,933
	23,083
	1,616,737
	7,671,005
Total des dépenses	7,018,133

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT
PONT INTERNATIONAL DE CORNWALL-ROOSEVELTOWN

Etat de l'exploitation pour la période du 3 juillet
au 31 décembre 1962

Recettes	
Péages	\$226,042
Intérêts	1,596
<hr/>	
Trais d'exploitation	227,638

Traitements et salaires	\$30,971
Entretien et réparation	29,683
Services d'annonces et de publicité	12,549
Location d'appareils de perception des péages	6,643
Electricité et mazout	5,878
Réserve pour dépréciation	4,419
Subventions tenant lieu d'impôts municipaux	4,258
Prestations aux employés	3,841
Assurances	1,651
Divers	6,638
<hr/>	
Excédent des recettes sur les frais d'exploitation transporté à l'état des recettes	106,531
et des dépenses	121,107

Remarque: Le 3 juillet 1962, l'Administration de la voie maritime du Saint-Laurent a pris en charge l'exploitation du pont à péage international de Cornwall-Rooseveltown de la Cornwall International Bridge Company Limited qui est à liquider ses affaires. Le 1er janvier 1963, la Seaway International Bridge Corporation, Ltd, filiale appartenant entièrement à l'Administration, a pris en charge l'exploitation du pont à péage.

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

Etat des recettes et des dépenses pour l'année terminée le 31 décembre 1962

(avec chiffres comparatifs pour l'année terminée le 31 décembre 1961)

1962	1961	Recettes
\$ 9,555,641	\$ 9,548,303	Péages
612,598	593,699	Loyers
177,668	150,550	Droits d'accostage et de terre-plein
121,107	—	Recettes nettes de l'exploitation du pont international de Cornwall-Rooseveltown (ANNEXE A)
224,908	154,704	Divers
10,691,922	10,447,256	
2,591,567	2,602,597	Frais d'exploitation
2,087,219	1,727,616	Frais d'entretien
1,232,498	1,071,183	Surveillance de l'exploitation et de l'entretien
1,759,721	1,616,737	Frais d'administration
7,671,005	7,018,133	A déduire: Partie des frais de surveillance et d'administration afférentes aux canaux non soumis au péage
7,346,573	6,729,848	Revenu net d'exploitation avant provision pour intérêts et renouvellement des machines et du matériel
15,396,959	13,792,739	Intérêts sur prêts de l'Etat (à l'exclusion de la somme de \$274,992 ajoutée aux frais de construction)
163,848	—	Intérêts sur réclamations des entrepreneurs et autres postes
888,554	200,565	Réserve pour renouvellement des machines et du matériel
16,449,361	13,993,304	
13,104,012	10,275,896	Perte nette de l'année

Remarque: Les péages pour le transit dans le canal Welland on été suspendus le 18 juillet 1962, suivant les instructions du gouverneur en conseil (C.P. 1962-1032) portant cette date.

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

Remarques concernant le bilan

1. Les sommes restant à verser relativement aux contrats dont les travaux n'étaient pas terminés au 31 décembre 1962 s'élevaient à environ \$1,600,000.
2. Une demande de réclamation supplémentaire de \$188,000, reçu d'un entrepreneur relativement à l'exécution d'un contrat, n'avait pas encore fait l'objet d'un règlement le 31 décembre 1962. L'offre de \$36,000, faite par l'Administration avec l'approbation du Conseil du Trésor, a été rejetée par l'entrepreneur. Ce dernier a intenté une poursuite contre l'Administration et réclame \$254,000 et les intérêts.
3. L'Administration estime à \$1,400,000 la somme à verser pour l'indemnisation des biens en voie d'expropriation au 31 décembre 1962.
4. Les frais nécessaires à la déviation des voies ferrées et au réaménagement des voies d'accès du pont Victoria se sont élevés à \$11,752,504 et ont été engagés par les chemins de fer Nationaux du Canada. De l'avis d'un conseiller juridique indépendant, cette somme est imputable à l'Administration, mais elle ne peut être versée qu'avec l'approbation du gouverneur en conseil, après que le Parlement aura voté les crédits nécessaires.
5. Conformément aux dispositions du décret C. P. 1961-1863 du 29 décembre 1961, le montant principal des emprunts obtenus en vertu de l'article 25 de la Loi sur l'Administration de la voie maritime du Saint-Laurent pour le financement de la construction de la voie maritime, plus les intérêts précédemment différés et tous les autres intérêts courus ou à échoir au 31 décembre 1963, devra être remboursé, avec les intérêts courants, en quarante-six versements annuels égaux, à compter du 31 décembre 1964.
6. La réserve pour le renouvellement des machines et du matériel, qui était de \$3,342,878 au 31 décembre 1962, représente la réserve accumulée pour le renouvellement des biens qui, de l'avis de l'Administration, devront être remplacés. Rien n'a été prévu dans les comptes pour le remplacement des bâtiments, des portes d'écluse, des écluses et des ponts. L'Administration estime que ces ouvrages de la voie maritime peuvent être tenus en état de fonctionnement en tout temps dans le cadre de son programme d'entretien.

PASSIF

1961	1962
\$2,022,432	\$ 1,588,141
37,941	35,835
837,214	294,581
2,897,587	1,918,557
Total des exigibilités	
897,586	450,979
Dépôts de garantie et garanties de péages des entrepreneurs (contre-partie)	
719,440	3,342,878
Réserve pour renouvellement des machines et du matériel	
Part de propriétaire du gouvernement du Canada:	
Immobilisations confiées à l'Administration par le gouverneur en conseil	
180,511,162	180,483,368
328,000,000	334,500,000
33,716,057	49,388,008
542,227,219	564,371,376
22,452,913	37,934,394
519,774,306	526,436,982
A déduire: déficit, selon l'état du déficit (ANNEXE C)	
Part nette	
524,288,919	532,149,396

J'ai examiné le bilan ci-dessus, ainsi que l'état des recettes et des dépenses et l'état du déficit s'y rapportant, et j'ai présenté un rapport le 29 mars 1963 au ministre des Transports.

L'Auditeur général du Canada,
 A. M. HENDERSON

Bilan arrêté

(avec chiffres com

ACTIF

1961	1962	
863,620	\$ 211,343	Bons du Trésor du Canada et dépôts bancaires à court terme
—	1,898,611	Comptes débiteurs (moins réserve pour créances douteuses)
499,289	622,324	Dette du Gouvernement du Canada—canaux non soumis au péage (état I)
311,884	70,192	Inventaires des matériaux, du matériel secondaire et des travaux d'atelier
855,941	675,718	en voie d'exécution—au prix coûtant (moins réserve pour matériel désuet)
2,530,734	3,478,188	Total des disponibilités
897,586	450,979	Cautionnements et espèces détenus à titre de dépôts de garantie et de garanties de péages des entrepreneurs (contre-partie)
466,762	846,122	Frais différés des projets et de l'acquisition du terrain pour jumelage ultérieur des écluses du canal maritime de Welland
		Immobilisations: (ANNEXE D)
		Acquis par l'Administration, au prix coûtant
300,666,659	305,361,958	Section du fleuve Saint-Laurent
32,288,395	33,253,684	Améliorations au canal maritime de Welland
7,029,079	8,443,350	Pont de Cornwall—chenal nord
339,984,133	347,058,992	Confées à l'Administration, aux valeurs de cession
130,625,654	130,548,637	Canal maritime de Welland (moins aliénations
49,784,050	49,766,478	Canaux non soumis au péage et autres biens
180,409,704	180,315,115	Total des immobilisations
520,393,837	527,374,107	
524,288,919	532,149,396	

Les remarques annexées font partie intégrante du présent état.

Certifié exact:

J. M. MARTIN
Le Directeur des finances et de la comptabilité,

Approuvé:

R. J. RANKIN
Le Président,

Conformément à ces arrangements financiers, les intérêts sur les opérations de l'année s'élèvent à \$15,396,959 (un montant supplémentaire de \$274,992 est compris dans les frais de construction), mais ces intérêts n'ont pas été payés et ont été portés au bilan sous Part de propriétaire du gouvernement du Canada. Rien n'a été porté aux opérations de l'année à l'égard de l'amortissement du principal des sommes empruntées.

Les frais d'exploitation et d'entretien des canaux et des ouvrages relevant de l'Administration sont définis, en vertu de l'alinéa c) de l'article 16, comme comprenant tous les frais d'exploitation de l'Administration ainsi que les réserves qui peuvent être approuvées par le Ministre. L'Administration est d'avis qu'il n'est pas nécessaire d'inclure la dépréciation dans les frais d'exploitation et d'entretien et que l'amortissement au cours d'une période de cinquante ans du principal des emprunts ainsi que des intérêts, comme l'exigent les alinéas a) et b), satisfait aux exigences de la Loi. Les frais afférents à l'année à l'étude ne comprennent donc aucune réserve pour la dépréciation. Une somme de \$2,710,283 a été affectée, au cours de l'année à l'étude, au remplacement des machines et du matériel, notamment de ceux des écluses, ponts et bâtiments. Sur cette somme, un montant de \$1,821,729 a été imputé au compte de déficit pour combler les dépenses des années 1959 à 1961, et un montant de \$888,554 a été imputé aux dépenses pour l'année terminée le 31 décembre 1962. Cette hausse a porté la réserve pour le renouvellement des machines et du matériel à \$3,342,878 au 31 décembre 1962.

Aucune somme n'a été affectée dans les comptes à l'égard du remplacement des bâtiments, portes d'écluse ni des écluses et des ponts. L'Administration estime que ces ouvrages de la voie maritime peuvent être tenus constamment en bon état dans le cadre de son programme d'entretien.

Dès que le nouveau pont du chenal nord eût été ouvert à la circulation le 3 juillet 1962, la *Cornwall International Bridge Company Limited* cessa ses opérations et elle s'apprête maintenant à liquider ses affaires. Les droits d'exploitation de la compagnie du pont ont été transférés à l'Administration et certaines de ses immobilisations sont en voie de délaissement. Etant donné qu'on s'attend à réaliser, par suite de la disposition des autres immobilisations, un montant symbolique par rapport au montant de \$200,000 investi par l'Administration dans les actions de la compagnie du pont, ce montant a été déduit à titre de placement et est maintenant inscrit comme partie du coût de la section du fleuve Saint-Laurent de la voie navigable.

En conformité des prescriptions de l'article 87 de la Loi sur l'administration financière et sous réserve des observations qui précèdent, je déclare qu'à mon avis

- a) l'Administration a tenu des livres de comptabilité appropriés;
- b) les états financiers de l'Administration

- (i) ont été préparés sur une base comparable à celle de l'année précédente et concordent avec les livres de comptabilité;
- (ii) dans le cas du bilan, donnent un exposé juste et fidèle de l'état des affaires de l'Administration à la fin de l'année financière; et
- (iii) dans le cas de l'état des dépenses, donnent un exposé juste et fidèle des recettes et des dépenses de l'Administration pour l'année financière; et
- c) les opérations de l'Administration venues à ma connaissance étaient de la compétence de l'Administration aux termes de la Loi sur l'administration financière et de toute autre loi applicable à l'Administration.

L'auditeur général,

A. M. HENDERSON

L'HONORABLE LÉON BALCEK
MINISTRE DES TRANSPORTS
OTTAWA

J'ai examiné les comptes et les états financiers suivants de l'Administration de la voie maritime du Saint-Laurent pour l'année terminée le 31 décembre 1962:

Bilan	
Etat des recettes et des dépenses pour l'année terminée le 31 décembre 1962	
Pont international de Cornwall-Rooseveltown	
Etat de l'exploitation pour la période du 3 juillet au 31 décembre 1962	Annexe A
Etat des dépenses pour l'année terminée le 31 décembre 1962	Annexe B
Etat du déficit pour l'année terminée le 31 décembre 1962	Annexe C
Immobilisations au 31 décembre 1962	Annexe D
Canaux non soumis au péage	
Etat des dépenses, des recettes, des dépenses pour ouvrages de protection	
et des dépenses en immobilisations pour l'année terminée le	
31 décembre 1962	Etat I

En vertu de l'article 25 de la Loi sur l'Administration de la voie maritime du Saint-Laurent, le ministre des Finances, avec l'approbation du gouverneur en conseil, peut de temps à autre consentir des prêts à l'Administration. L'article 13 de la Loi, dans sa forme modifiée, stipule que l'ensemble des montants ainsi empruntés en vertu de la Loi et non encore remboursés ne doit jamais dépasser 345 millions de dollars.

Le bilan ci-joint indique qu'au 31 décembre 1962, l'Administration devait au gouvernement du Canada, à l'égard des emprunts et des intérêts différés, une somme de \$383,888,008 se répartissant ainsi:

Emprunts contractés en vertu de l'article 25 de la Loi	\$334,500,000
Intérêts au 31 décembre 1959—différés	19,427,117
Intérêts pour l'année 1961—différés	14,288,940
Intérêts pour l'année 1962—différés	15,671,951
	<hr/> \$383,888,008 <hr/>

En vertu de l'article 16 de la Loi sur l'Administration de la voie maritime du Saint-Laurent, les péages sont destinés à assurer un revenu suffisant pour couvrir les frais d'exploitation de l'Administration, lesquels comprennent des versements à l'égard des intérêts sur les montants empruntés par l'Administration et des versements suffisants pour amortir le principal des montants empruntés pendant une période d'au plus cinquante ans. Aux termes de ces dispositions, les conditions initiales selon lesquelles des prêts étaient consentis à l'Administration en vertu de l'article 25 de la Loi, n'exigeaient le paiement des intérêts que pendant les trois premières années entières d'exploitation (soit jusqu'au 31 décembre 1962); par la suite, il devait être payé des montants annuels suffisants pour amortir en quarante-sept ans (c'est-à-dire au cours d'une période se terminant le 31 décembre 2009) tous les emprunts et intérêts y afférents.

Comme il est mentionné à la remarque n° 5 du bilan, les termes des arrangements financiers de l'Administration ont été modifiés au cours de 1961. Ils prévoyaient maintenant le remboursement de tous les emprunts, plus les intérêts précédemment différés et tous les autres intérêts courus ou à échoir au 31 décembre 1963, ainsi que les intérêts courants, en quarante-six versements annuels égaux, à compter du 31 décembre 1964.

Les points saillants de l'exploitation du canal de Welland depuis 1959 sont donnés dans le tableau suivant:

(en millions)				(en millions)						
Années terminées le 31 décembre				Années terminées le 31 décembre						
1959	1960	1961	1962	1959	1960	1961	1962			
(neuf mois)				(neuf mois)						
Cargaisons	27.5	29.2	31.5	35.4	Recettes — Pêages	\$ 1.2	\$ 1.3	\$ 1.5	\$ 0.6	\$ 0.8
					— Divers	0.6	0.7	0.7	0.8	
Frais d'exploitation et d'entretien et part des frais d'administration	2.4	3.8	4.5	4.4	Frais d'exploitation et d'entretien et part des frais d'administration	0.2	0.3	0.4	0.4	
Montant prévu pour le remplacement	0.2	0.3	0.4	0.4	Montant prévu pour le remplacement	0.2	0.3	0.4	0.4	
Perte nette d'exploitation	(0.8)	(2.1)	(2.7)	(3.4)	Perte nette d'exploitation	(0.8)	(2.1)	(2.7)	(3.4)	
Intérêts	0.7	1.2	1.5	1.8	Intérêts	0.7	1.2	1.5	1.8	
Perte de l'année	(1.5)	(3.3)	(4.2)	(5.2)	Perte de l'année	(1.5)	(3.3)	(4.2)	(5.2)	
Déficit accumulé	(1.5)	(4.8)	(9.0)	(14.2)	Déficit accumulé	(1.5)	(4.8)	(9.0)	(14.2)	

Le tableau suivant donne les points saillants de l'exploitation de la section du fleuve Saint-Laurent depuis l'ouverture de celle-ci en 1959:

(en millions)				(en millions)					
Années terminées le 31 décembre				Années terminées le 31 décembre					
1959	1960	1961	1962	1959	1960	1961	1962		
(neuf mois)				(neuf mois)					
Cargaisons	20.6	20.3	23.4	25.6	Recettes — Pêages	\$ 7.1	\$ 7.2	\$ 8.1	\$ 8.9
					— Divers	.3	.1	.1	.2
					Frais d'exploitation et d'entretien et part des frais d'administration	1.4	2.1	2.3	2.9
					Montant prévu pour le remplacement	.3	.4	.5	.5
					Profit net d'exploitation	5.7	4.8	5.4	5.7
					Intérêts	7.4	11.5	12.7	13.6
					Perte de l'année	(1.7)	(6.7)	(7.3)	(7.9)
					Déficit accumulé	(1.7)	(8.4)	(15.7)	(23.6)

Aux termes du décret C. P. 1961-1863, le montant principal des emprunts contractés en vertu de l'article 25 de la Loi ainsi que les intérêts maintenant courus ou qui seront courus en décembre 1963 doivent être remboursés, avec les intérêts courants sur ces montants, en quarante-six versements annuels égaux effectués de 1964 à 2009 inclusivement.

Dépenses en immobilisations

En 1962, les dépenses effectuées pour l'acquisition ou la construction d'immobilisations se sont élevées à \$7,900,000. Les plus importantes sont les suivantes:

\$1,900,000 pour la grue flottante S.L.S. HERCULES, \$1,500,000 pour le pont du chenal nord (Cornwall), \$3,400,000 pour la construction et l'amélioration de la section du fleuve Saint-Laurent de la voie maritime et \$1,100,000 pour l'amélioration de la section de Welland.

Avant 1962, l'Administration avait pour ligne de conduite de prévoir un montant annuel pour le remplacement du matériel non durable dont la durée de service est de moins de cinquante ans. En 1962, cette ligne de conduite a été révisée et il a été décidé de prévoir également des montants pour le renouvellement des machines et du matériel faisant partie des ouvrages (des écluses et des ponts, par exemple) des sections du Saint-Laurent et de Welland. Pour l'année 1962, il en est résulté une augmentation d'environ \$675,000 du montant prévu pour le remplacement. Des redressements correspondants ont été effectués dans le cas des montants prévus pour les années 1959 à 1961 inclusivement.

Section du fleuve Saint-Laurent

L'Administration impose et perçoit des péages dont une partie va à la *Saint Lawrence Seaway Development Corporation* et dont l'autre partie lui revient. Durant l'année 1962, les péages imposés pour le compte de la *Development Corporation* se sont établis à \$3,667,000 en monnaie des États-Unis (\$3,331,000 en monnaie des États-Unis en 1961).

Les péages que l'Administration a imposés pour son compte se sont établis à \$8,914,000 en monnaie canadienne (\$8,086,000 en monnaie canadienne en 1961).

En annexe au présent rapport se trouvent le bilan de l'État des recettes et des dépenses pour l'année se terminant à cette même date, conformément au rapport de l'Auditeur général.

Suit un état des sources et de l'utilisation des fonds pour l'année 1962 et pour la période allant du commencement de la construction de la voie maritime jusqu'au 31 décembre 1962:

(En millions de dollars)	
Année du 1 ^{er} août 1954 (cumulativement)	31 décembre 1962
1962	au

Sources des fonds	
Emprunts et autres dettes	\$334.5
Intérêts différés	6.5
Produits de la vente ou autres conversions	22.2
Provision pour le remplacement d'immobilisations	0.1
Divers	0.2
Utilisation des fonds	\$23.2
Immobilisations—additions brutes	\$330.7
Coût de construction ou d'acquisition	17.5
Intérêts durant la construction	0.2
Dépenses relatives à des projets (Welland)	7.9
Perte nette	13.1
Augmentation de l'actif net	21.4
	\$388.5

Emprunts

La modification apportée le 28 février 1962 à la Loi sur l'Administration de la voie maritime du Saint-Laurent a porté de \$335 millions à \$345 millions la limite des emprunts que l'Administration peut effectuer. Comme l'indique l'état ci-dessus, au 31 décembre 1962, les dettes de l'Administration (capital et intérêts différés) s'élevaient à \$383,900,000 répartis ainsi qu'il suit:

(En millions de dollars)	
Brutes	Nettes
Immobilisations	Autre actif
Section du fleuve Saint-Laurent	\$305.4
Section du canal de Welland	33.3
Section du chenal nord (Cornwall)	8.4
	\$347.1
Reserves	3.3
Nettes	\$343.8
Autre actif	2.2
Déficit	37.9
Global	\$383.9

plupart des cas, ils font parvenir de la documentation aux correspondants mais ils doivent souvent faire des recherches approfondies et parfois préparer des articles sur des sujets particuliers.

Les milieux de l'enseignement reconnaissent de plus en plus le rôle que joue la voie maritime dans la vie du pays, et les services d'information répondent en détail et sans retard aux demandes de renseignements d'étudiants, d'instituteurs et de professeurs d'université, tant du Canada que de l'étranger.

Le personnel de l'Administration voit à la publication du Manuel des capitaines pour la voie maritime du Saint-Laurent, du Rapport sur le trafic de la voie maritime du Saint-Laurent et du présent rapport. Les deux premiers documents sont publiés en collaboration avec l'organisme américain qui régit l'exploitation de la voie maritime, la *Saint Lawrence Seaway Development Corporation*.

DIVISION DES PONTS

Les services d'information ont répondu en 1962 à plus de 4,000 demandes de renseignements. Dans la *ARRAN* de la Marine royale canadienne.

au Canada en juillet de Sa Majesté la Reine-mère Elisabeth, au cours de laquelle elle parcourut une partie de la voie maritime à bord de la frégate "INCH". Parmi les événements de 1962, mentionnons la visite

typique la voie maritime. Particulières et de fonctions officielles auxquelles par divers ministères et organismes à l'occasion de visites

Les services collaborer et travaillaient de concert avec qu'à l'étranger. Leur viennent du secteur public et privé, tant au Canada répondent aussi aux demandes de renseignements qui des ministères de l'Etat et des organismes publics. Ils et des annonces à l'intention des usagers, des journaux, information est très variée. Ils publient des communiqués Le rôle joué par les services d'information de l'Admi-

Lorsque la construction de la voie maritime du Saint-Laurent fut entreprise en 1954, la *Cornwall International Bridge Company Limited*, compagnie à capital-actions constituée en vertu de la loi fédérale sur les compagnies, exploitait un pont à péage international pour véhicules et piétons sur le Saint-Laurent entre Cornwall (Ont.) et Rooseveltown (N.Y.). Cette compagnie occupait, en vertu d'un bail, les travées basses des chenaux nord et sud du pont-trail du New York Central. Ces installations ont été achetées de la compagnie de chemin de fer par l'Administration de la voie maritime du Saint-Laurent et la *Saint Lawrence Seaway Development Corporation* (société constituée du Gouvernement des Etats-Unis) pour les besoins de la navigation de la voie maritime. Ainsi, les organismes de la voie maritime devinrent locataires de la compagnie qui exploitait le pont.

Toutes les actions en cours de la *Cornwall International Bridge Company, Limited* ont été achetées en commun, en 1957, par la *Saint Lawrence Seaway Development Corporation* des Etats-Unis et l'Administration de la voie maritime du Saint-Laurent du Canada. Par la suite, les organismes de la voie maritime ont exploité et gère le pont international qui relie Cornwall (Ont.) et Rooseveltown (N.Y.), par l'intermédiaire de cette compagnie.

En attendant que cette filiale soit constituée en société, l'exploitation du pont a été confiée temporairement à la division des ponts de l'Administration de la voie maritime du Saint-Laurent pour que celle-ci s'en occupe au nom des deux organismes et aux mêmes conditions qu'antérieurement. L'exploitation de ce pont à péage international sera transmise à la *Seaway International Bridge Corporation, Ltd.*, le 1^{er} janvier 1963. Les états financiers de la période allant du 3 juillet 1962 au 31 décembre 1962 sont donnés en détail ailleurs dans le présent rapport.

A l'achèvement de la construction de la nouvelle travée du chenal nord, des cérémonies officielles ont marqué l'ouverture de ce pont international le 3 juillet 1962.

PERSONNEL

Le régime de sécurité sociale de l'Administration a fait l'objet d'une analyse approfondie en 1962. Les indemnités versées au chapitre de l'assurance hospitalière-médicale-chirurgicale du régime ont été accrues, à un coût supplémentaire relativement faible. En outre, une échelle d'assurance-vie améliorée qui assure une meilleure couverture a été établie. Les retraites ainsi que les veuves qui reçoivent des pensions de retraite bénéficient maintenant de l'assurance en vertu du régime.

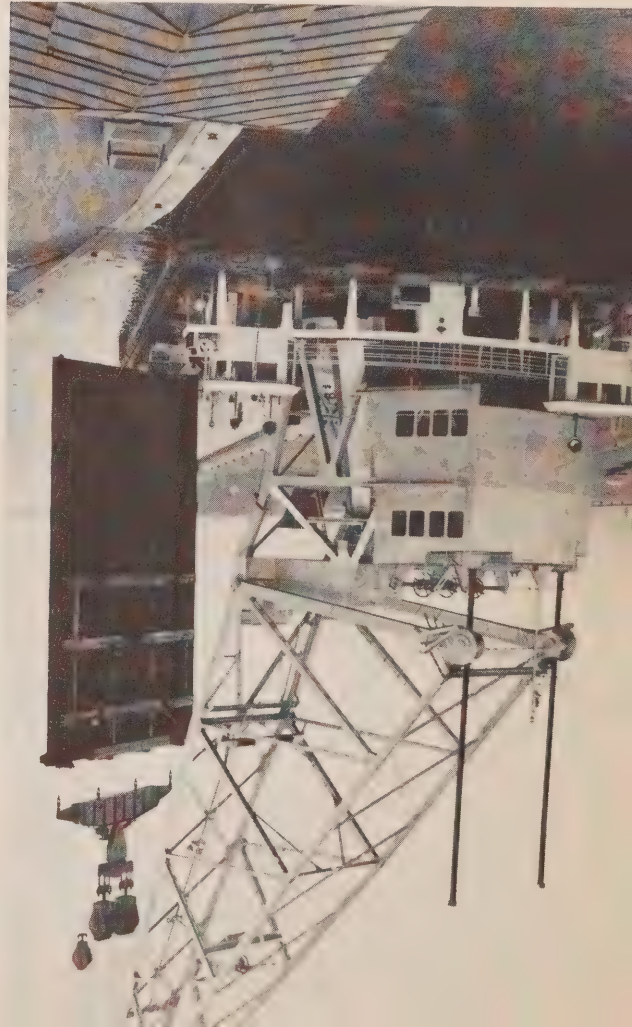
Au 31 décembre 1962, le nombre total d'employés s'établissait à 1,328.

ACHATS ET MAGASINS

Des méthodes d'entreposeage améliorées ont été mises au point et le personnel a été réorganisé, ce qui a permis d'assigner des responsabilités précises à chaque position. On a poursuivi l'application d'un programme de disposition des excédents et, au cours de l'année, on a déclaré, par l'entremise de la Corporation de disposition des biens de la Couronne, que des biens d'une valeur initiale d'environ \$400,000 étaient en excédent des besoins. L'Administration achète pour environ deux millions de dollars par année.

PEAGES ET STATISTIQUES

Le changement important qui s'est produit dans l'imposition des péages durant la saison de navigation a été la suspension des péages dans le canal de Welland en vertu du décret 1962-1032, laquelle est entrée en vigueur le 18 juillet 1962. Cette suspension n'a donné lieu qu'à de légères modifications des procédures et qu'à une faible réduction du nombre de factures délivrées parce que la plupart des navires transitaient tant dans la voie maritime du Saint-Laurent que dans le canal de Welland. Des statistiques sur le trafic sont publiées régulièrement tous les mois pendant la saison de navigation, et un rapport complet sur le trafic est préparé tous les ans.



Le S.L.S. Hercules, grue lève-portes flottante, pivote et automoteur, lève un vantail de porte de 250 tonnes à l'écluse de Côte Sainte-Catherine.

L'Administration fait la perception des péages pour son propre compte et pour le compte de la *Saint Lawrence Seaway Development Corporation* des États-Unis, et remet à l'organisme américain la part que lui revient de droit.

Aucune révision importante de l'imposition des péages n'a été faite durant l'année. Seule a été effectuée la reclassement d'un petit nombre de denrées. Cette reclassement a été présentée à la Commission consultative des péages pour décision. Les cargaisons en transit des navires remontants ont été classées comme du lest durant la saison et n'ont donc pas été assujéties au péage.

se poursuit. On a terminé au cours de l'année la remise en état du pont de la rue Charlevoix (n° 4) et on a adjugé un contrat visant des travaux importants de réparation au pont Black (n° 1). Ces derniers travaux sont censés être terminés en avril 1963.

Prolongement de l'égoût collecteur devant desservir Saint-Hubert, Brossard et Notre-Dame

On a adjugé un contrat pour la construction d'un prolongement de 6,000 pieds de l'égoût collecteur actuel de 78 pouces depuis un point situé à Préville jusqu'à un point situé dans la ville de Brossard, où il a été relié à l'égoût de 72 pouces de Saint-Hubert. Les travaux ont commencé au début de l'été et étaient presque terminés à la fin de l'année. L'égoût collecteur desservira dix municipalités de la rive sud, de Longueuil jusqu'aux limites de la ville de Laprairie.

Règlement des réclamations en suspens

Le 1^{er} janvier 1962, huit réclamations faites par des entrepreneurs à l'égard de la construction de la voie maritime du Saint-Laurent étaient en suspens. Au cours de l'année, toutes ces réclamations ont été réglées, sauf une. L'entrepreneur en cause a rejeté la recommandation faite par l'Administration ainsi qu'une autre recommandation faite par le comité consultatif des réclamations relatives à la voie maritime, nommé par le Conseil du Trésor, et il a confié sa cause à un avocat.

ADMINISTRATION

La région de l'Est va de l'entrée de la voie maritime à Montréal jusqu'à l'extrémité ouest du lac Saint-Louis et son bureau central se trouve à Saint-Lambert (P.Q.). Le canal de la rive sud qui comporte deux écluses, sur la route principale de la voie maritime, ainsi que le canal de Lachine font partie de cette région.

La région centrale, du côté canadien, va de l'extrémité ouest du lac Saint-Louis jusqu'à l'écluse d'Iroquois inclusivement, et comprend le canal du même nom. Elle comprend également le canal de Beauharnois et ses deux écluses, le chenal du lac Saint-François, et la partie du canal de Cornwall encore en service. Le bureau central de cette région se trouve à Cornwall (Ont.).

La région de l'Ouest englobe surtout le canal de Welland. Elle comprend également l'écluse et le canal canadiens de Sault-Sainte-Marie (Ont.). Le bureau central de cette région se trouve à St. Catharines (Ont.).

temps de remplissage de 15 minutes à 12 minutes. On étudie la possibilité de réduire le temps de remplissage de toutes les écluses du canal de Welland, ainsi que d'améliorer les vannes dont elles sont munies, et on poursuit également des recherches en vue de réduire la houle dans les biefs.

Remise en état du pont qui enjambe la rivière Welland à Chippewa

Le pont à bascule qui enjambe la rivière Welland à Chippewa n'avait pas fait fonction de pont mobile depuis plus de 20 ans. On avait enlevé une bonne partie des machines, et les arbres de transmission, pignons, etc. qui s'y trouvaient encore étaient rouillés et bloqués. La corrosion avait affaibli le pont et des réparations s'imposaient. On a donc entrepris la réalisation d'un programme en deux stades, comportant l'enlèvement des machines et du bâtiment qui les abritait, le contre-poids et toutes les pièces inutiles, en vue de remplacer le pont à bascule par une travée fixe. Le premier stade des travaux a été réalisé dans le cadre du programme des travaux d'hiver de 1961-1962, tandis que le deuxième stade se poursuit au cours de l'hiver de 1962-1963.

Remise en état des ponts du canal de Lachine

Le programme de réparations et de modifications importantes qui s'imposait par suite de l'usure et de la corrosion des ponts qui enjambent le canal de Lachine

leur domaine d'activité.

Les principaux fonctionnaires exécutifs qui relèvent de l'Administration sont les trois directeurs régionaux.

Les modalités de l'organisation de l'Administration ont été révisées au cours de 1962; on a établi des cadres moins rigides et plus conformes à l'activité de l'Administration. Le régime établi comporte la mise sur pied de services d'exécution et de services consultatifs, ce qui améliore les moyens de communication entre l'Administration et ses principaux services d'exécution chargés de réaliser chaque jour dans chaque région les divers programmes de la voie maritime.

Le régime permet de délimiter davantage les attributions des services consultatifs et leur facilite la tâche de conseiller l'Administration et les services d'exécution sur des questions qui touchent plus particulièrement

Modifications apportées aux poulies de contreponds des ponts levants verticaux

On a fait des études approfondies en vue de trouver la cause des fissures qui se produisaient dans les poulies de contreponds des ponts levants verticaux des régions de l'Est et du Centre. Les réparations provisoires effectuées durant l'hiver de 1961-1962 aux ponts de Saint-Louis et de Valleyfield se sont révélées inefficaces. On a donc conçu et fabriqué de nouveaux moyens en acier coulé qu'on a installés sur les ponts-rails de Caughnawaga, et qu'on a installés sur les ponts-rails de Saint-Louis et de Valleyfield. Pour ce qui est du pont de Saint-Lambert, dont la résistance n'a pas été taxée exceptionnellement, on a commandé de nouveaux moyens qui seront entreposés en vue d'être installés plus tard.

Amélioration du chenal et aménagement des pentes entre les écluses 3 et 4 du canal de Welland

Un contrat comportant l'excavation de 500,000 verges cubes d'argile et de pierre a été adjugé en octobre en vue d'améliorer le canal entre les écluses 3 et 4. A la fin de l'année, on avait terminé le quart environ des travaux d'excavation, qui doivent être achevés avant l'ouverture de la saison de navigation au printemps de 1963.

Amélioration des installations de vidange des écluses jumelées 4 du canal de Welland

Au cours des trois dernières années, on a tenté sans succès par deux fois de vider l'une des écluses jumelées 4 en vue d'y effectuer des réparations d'urgence. On a constaté chaque fois que les vieilles portes de vidange en bois étaient inefficaces et on a dû drainer toute l'étendue du canal jusqu'à l'écluse 3, ce qui interrompait toute circulation sur le canal.

On a donc décidé d'enlever les vieilles portes et de les remplacer par des nouvelles, qui seront placées au besoin au moyen d'un treuil à l'entrée est ou ouest de l'écluse.

L'une ou l'autre écluse pourra être vidée rapidement au moyen de pompes à grand débit, l'écluse non touchée pouvant continuer de servir à la circulation dans le canal.

Ces travaux ont été entrepris après la clôture de la navigation cette année et ils se poursuivront durant l'hiver pour se terminer au printemps de 1963.

Modifications apportées aux seuils des portes busquées dans le canal de Welland

On a terminé au printemps de 1962 les travaux de remplacement des anciens seuils à revêtement de bois par des seuils permanents en acier et en béton, travaux qui avaient été entrepris en 1961.

Guides d'étanchéité pour les portes d'écluse du canal de Welland

De par leur construction initiale, les portes busquées des écluses du canal de Welland n'étaient pas toujours étanches, bien que par la pression exercée par l'eau elles étaient étanches près des seuils de bois. L'installation à demeure de seuils améliorés n'a pas toujours assuré cette étanchéité, et il fallait installer un guide plus précis en vue d'obtenir ce résultat. On a mis au point un tel dispositif dont on a muni toutes les portes au cours de l'année.

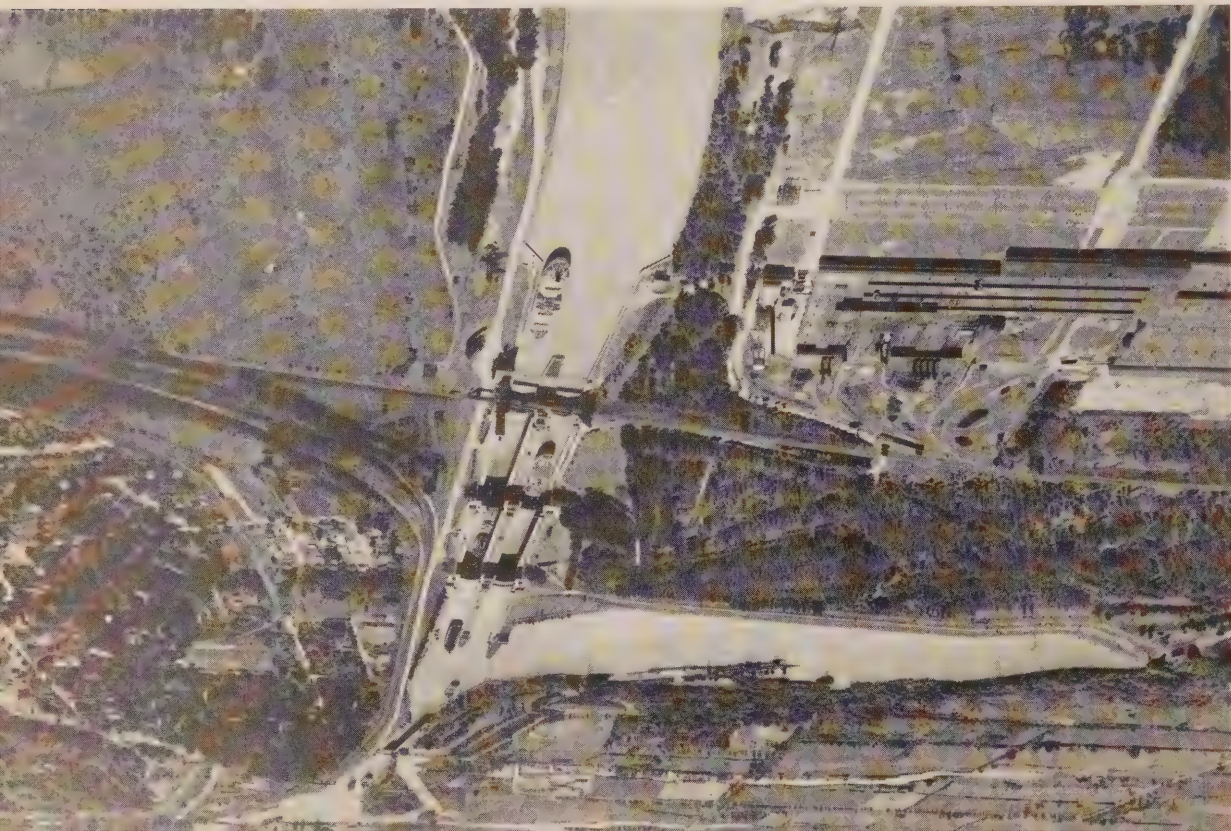
Retenue en amont de l'écluse 7 du canal de Welland et récupération de Marlat's Pond

En décembre 1961, un contrat a été adjugé pour l'exécution de travaux d'excavation en vue de l'agrandissement de l'aire d'accumulation d'eau en amont de l'écluse 7. Les déblais ont servi à remplir une partie du terrain marécageux connu sous le nom de Marlat's Pond. Ces travaux ont été effectués durant l'hiver de 1961-1962. On a constaté par la suite qu'il était souhaitable de terminer la récupération du secteur; un deuxième contrat a donc été adjugé à l'automne de 1962 pour l'exécution, dans la retenue de l'écluse 7, d'autres travaux d'excavation dont les déblais serviront à cette fin.

Essais et recherches hydrologiques en vue d'améliorer l'exploitation des écluses

On a poursuivi et intensifié en 1962 le programme d'essais et de recherches qui avait été établi en 1960 afin d'étudier les méthodes propres à améliorer l'efficacité de l'exploitation des écluses. Un système de commande semi-automatique par boutons poussoirs des opérations d'éclusement a été mis en service à l'écluse de Saint-Lambert en juin et à l'écluse 7 du canal de Welland en septembre. Par suite de l'installation de ce système, le fonctionnement consécutif des vannes est assuré selon le plus haut degré d'efficacité. Les améliorations apportées à l'écluse 7 ont permis de réduire le

Vue de l'air: Les écluses 4, 5 et 6 du canal de Welland sont jumelées et comportent une suite de biefs, ce qui assure l'éclusement simultané des navires remontants et des navires descendants.



Acquisition de terrains pour le jumelage des écluses du canal de Welland

L'Administration a fait l'acquisition en mai de 320 acres de terrain le long du canal de Welland qui serviront au jumelage des écluses nos 1, 2, 3, et 7. On continuera d'établir les plans en vue du jumelage éventuel de ces écluses. Les écluses nos 4, 5 et 6 du canal de Welland sont jumelées.

Amenagement paysagiste

Au cours de l'année écoulée, on a poursuivi l'application d'un programme de nettoyage près des diverses écluses et au point international de Cornwall. Le premier stade des travaux entrepris à l'écluse de Saint-Lambert était presque terminé et les travaux effectués à l'écluse de Côte Sainte-Catherine étaient passablement avancés lorsqu'on a dû les interrompre pour l'hiver. On a commencé les travaux à l'écluse aval de Beauharnois. Le premier stade des travaux aux voies d'accès du pont du chenal nord à Cornwall a été presque parachevé. On a poursuivi les travaux de mise en valeur d'un ancien secteur de déblais sur l'île de Cornwall.

Prolongement du bajoyer amont de l'écluse amont de Beauharnois

On a terminé en juin de cette année les travaux de construction d'un prolongement de 490 pieds au bajoyer actuel, commencés à la fin de l'automne de 1961. Les conditions de la navigation à cet endroit s'en sont trouvées sensiblement améliorées.

Défenses en bois sur les bajoyers d'entrée

On a continué l'application du programme visant l'installation de défenses en bois et en caoutchouc butylique sur les divers bajoyers d'entrée, commencé en 1959. Au début de 1962, on a terminé l'installation de défenses à l'écluse 8 et celle de défenses supplémentaires aux écluses 1, 2 et 3 ainsi qu'à la porte de garde du canal de Welland. Au cours de l'hiver de 1962-1963, on a installé des défenses à l'écluse d'Iroquois ainsi qu'au bajoyer d'entrée nord-ouest à l'écluse 8 du canal de Welland. On aura ainsi installé des défenses en bois le long de tous les bajoyers d'entrée des principales écluses de la voie maritime.

Le programme visant à assurer, par l'installation de clôtures, la protection du public contre les dangers que présentent les sas d'écluse ouverts s'est poursuivi sur le canal de Weiland, où on a posé une clôture de quatre pieds de hauteur aux écluses 2, 4, 6 et 8.

Améliorations

Au cours de l'année, on a installé du nouveau matériel et on a effectué des essais d'ordre hydraulique, mécanique et électrique en vue d'améliorer les mesures de sécurité, rendre l'exploitation plus efficace et accélérer le mouvement des navires.

L'Hydro-Québec est à aménager des aires de mouillage d'urgence dans le canal de Beauharnois. On a installé des bittes d'amarrage supplémentaires à l'écluse d'Iroquois pour aider les navires qui y pénètrent; on a installé des garde-corps sur toutes les échelles verticales des puits des vannes à l'écluse de Beauharnois et on a remplacé les engrenages coniques de la défense n° 3 de l'écluse de Saint-Lambert par des engrenages hélicoïdaux en vue d'augmenter la résistance des machines.

On a poursuivi l'étude de l'état de tout les ouvrages du canal de Lachine et on projette d'effectuer les réparations qui s'imposent à divers ouvrages. On a entrepris l'exécution d'un programme de modernisation et d'amélioration de toutes les machines de l'écluse de Sault-Sainte-Marie par la remise en état des machines des portes.

Entrée

On a exécuté un programme complet d'entretien pré-ventif et correctif du matériel, des ouvrages et des machines, y compris le graissage ordinaire de toutes les

TRAVAUX DE GÉNIE

Hydraulique

La mesure des niveaux et du débit des eaux a été effectuée toute l'année afin de régulariser l'écoulement des eaux dans les canaux, d'empêcher les crues et de conserver les réserves d'eau nécessaires à la navigation, à la production d'électricité, à l'alignement en eau des villes et aux autres services d'eau en location.

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On a poursuivi l'exécution du programme de balayage et de légers travaux de dragage, destiné à assurer la profondeur des chenaux.

Sur les canaux non soumis au péage, on a terminé le programme consistant à refaire le parement du bajeur nord de l'écluse de Sault-Sainte-Marie et on a entrepris le remplacement des madriers du radier. On a installé des palplanches d'acier à l'écluse 15 du canal de Cornwall afin d'empêcher l'érosion des berges. Les bajeurs des écluses 4 et 5 du canal de Lachine ont été jointoyés afin d'éliminer les fissures et les vides.

Travée du chenal nord-pont international de la voie maritime

Les directions ou pivoter sur elle-même. Les membres d'équipage et les travailleurs de jour peuvent y loger. Bien qu'elle soit affectée d'abord au service de la voie maritime, elle peut manoeuvrer de lourdes charges de marchandises dans le port de Montréal.

Le pont du chenal nord qui relie Cornwall et l'île de Cornwall a été inauguré officiellement le 3 juillet. Sa longueur est de 5,330 pieds et son tirant d'air de 120 pieds. Il comporte une chausée de 27 pieds de largeur pour véhicules ainsi qu'un passage pour piétons. Du côté de Cornwall, des voies d'accès relient le pont aux rues et routes de l'endroit.

Au cours de la morte-saison de navigation, des cours d'instruction destinés aux régulateurs, maîtres éclusiers et autres opérateurs ont été donnés au bureau central de Cornwall et sur le canal de Welland; ces instructions portaient sur les différents aspects de l'exploitation conformément à la réglementation de la voie maritime.

On enseigne aux régulateurs à faire preuve de sécurité, d'efficacité et de courtoisie et à utiliser les méthodes et les codes qui s'imposent en radiotéléphonie; on insiste également durant tout le cours sur la transmission aux capitaines des navires de renseignements exacts et précis en matière de régulation. Étant donné l'encombrement grandissant des ondes hertziennes, on a signalé aux employés et aux navires de la voie maritime que seuls les messages essentiels doivent être transmis, soit à destination soit en provenance des stations de régulation de la voie maritime.

On enseigne aux maîtres éclusiers et aux opérateurs les méthodes sûres et efficaces de la manoeuvre des navires, le fonctionnement du matériel d'amarrage des navires, l'interprétation des expressions nautiques ainsi que le sens et l'application du Règlement sur la voie maritime. Vu que les cours d'instruction ont donné d'heureux résultats jusqu'ici et que l'exploitation s'est améliorée en conséquence durant la saison de navigation, on se propose de les élargir davantage en 1963.

Inspections des navires

Au cours de l'année on a présenté à l'examen les plans de plusieurs navires en vue de s'assurer qu'ils soient conformes aux prescriptions de la voie maritime relatives entre autres au matériel d'amarrage, aux bras d'atterrissage et aux défenses. En outre, on a appliqué 24 heures par jour, 7 jours par semaine, un programme d'inspection du matériel dont doivent être dotés les navires transitant dans la voie maritime. On a effectué à cet égard plus de 400 inspections pendant la saison de navigation.

Mouvements des navires

Par suite de la modification apportée aux limites de vitesse fixées au début de la saison de navigation, la vitesse des navires empruntant la voie maritime s'est uniformisée dans une grande mesure. Il semble cependant que les navires aient encore trop tendance à ne pas tenir compte des règlements, surtout pour ce qui est des restrictions relatives au tirant d'eau et de l'observation des indications de limite d'approche et d'arrêt. Au cours de la saison de 1963, on tentera davantage de mettre un frein à ces infractions aux règlements.

L'utilisation des communications radiotéléphoniques VHF (très haute fréquence) qui avait été fortement recommandée depuis l'ouverture de la voie maritime en 1959 est devenue obligatoire pour les messages relatifs à la régulation à compter de l'ouverture de la saison de navigation de 1962.

Accidents et retards

La navigation a été surtout retardée à cause de conditions atmosphériques défavorables comme les grands vents et la brume. Le mauvais temps a causé la perte de 827 heures en 1962 contre 657 heures en 1961. Les défaillances du matériel ont été la cause de retards formant un total de 49 heures, dont 17 heures dans le canal de Welland, contre un total de 125 heures en 1961, dont 94 dans le canal de Welland.

Genre d'accident	Nombre de navires impliqués
Collision (9 accidents)	18
Navires abordant des ponts	13
Navires percutant les câbles de garde aux écluses	4
Navires percutant les bajoyers et les murs d'approche	18
Navires percutant les murs de chute	3
Echouages (navires à l'extérieur des limites du chenal)	9
TOTAL	65

Dans la section du Saint-Laurent, 26 navires impliqués dans des accidents ont causé environ 7 heures de retard, alors que dans le canal de Welland, il y a eu 39 accidents qui ont entraîné des retards représentant au total 38 heures. Une analyse des statistiques concernant le canal de Welland révèle que moins de trois navires d'eau intérieures par 1,000 passages ont été impliqués dans des accidents, soit la même proportion que l'année précédente. Toutefois, le nombre d'échouages impliqués dans des accidents accuse une faible augmentation, car il s'établit à 13 navires par 1,000 passages en 1962 contre 11 en 1961.

Plantation de brise-vent et installation de clôtures

On a planté environ 3,600 peupliers et sapins sur les digues des écluses de Saint-Lambert et de Côte Sainte-Catherine et 1,000 peupliers le long du canal de Welland. Ces arbres accorderont aux navires qui transistent dans le réseau une protection contre les vents.

Trafic dans les canaux non soumis au péage

En 1961 et 1962, le nombre de transits, le tonnage des cargaisons et la jauge des navires qui ont emprunté ces canaux ont été les suivants:

Canal et direction	Nombre de transits		Jauge brute au registre (tonneaux)		Tonnes de cargaisons	
	1961	1962	1961	1962	1961	1962
Lachine:						
Navires remontants	965	715	762,371	581,238	40,003	39,453
Navires descendants	1,160	828	1,063,659	801,527	1,052,952	849,211
Total	2,125	1,543	1,826,030	1,382,765	1,092,955	888,664
Cornwall:						
Navires remontants	200	225	136,168	130,898	193,438	171,077
Navires descendants	189	221	130,563	130,975	—	171,077
Total	389	446	266,731	261,873	193,438	171,077
Sault-Sainte-Marie:						
Navires remontants	1,342	1,079	2,871,805	2,138,327	475,263	361,531
Navires descendants	2,113	2,077	1,635,741	1,804,901	672,122	736,655
Total	3,455	3,156	4,507,546	3,943,228	1,147,385	1,098,186

Péages

Les péages appliqués au trafic de la voie maritime ont

rapporté, en 1962, des recettes s'élevant à \$12,574,775. Toutefois, ce montant comprend un montant de \$640,193 perçu sur le canal de Welland jusqu'au 18 juillet 1962

seulement, alors que les péages furent suspendus en

vertu du décret C.P. 1962-1032.

Le tableau ci-après donne les péages perçus en 1960, 1961 et 1962 mais ne comprend pas les droits perçus à l'égard des transits d'embarcations de plaisance ni les

EXPLOITATION

La saison de navigation

La saison de navigation dans les canaux du Saint-Laurent s'étend habituellement de la mi-avril à la fin de novembre et, dans le canal de Welland, du 1^{er} avril à la mi-décembre. Durant cette période, toutes les installations de la voie maritime fonctionnent vingt-quatre heures par jour, sept jours par semaine.

Grâce aux conditions météorologiques favorables, la navigation dans les écluses canadiennes de la section du fleuve Saint-Laurent s'est ouverte au jour prévu. Toutefois, ce n'est que le 23 avril que les navires ont pu traverser la voie maritime d'un bout à l'autre, à cause d'une fissure dans un seuil de l'écluse Eisenhower. Étant donné également que le lac Saint-Louis était recouvert de glace, le mouillage des aides lumineuses à la navigation a dû être retardé jusqu'au 23 avril, ce qui

minier le 12 décembre.

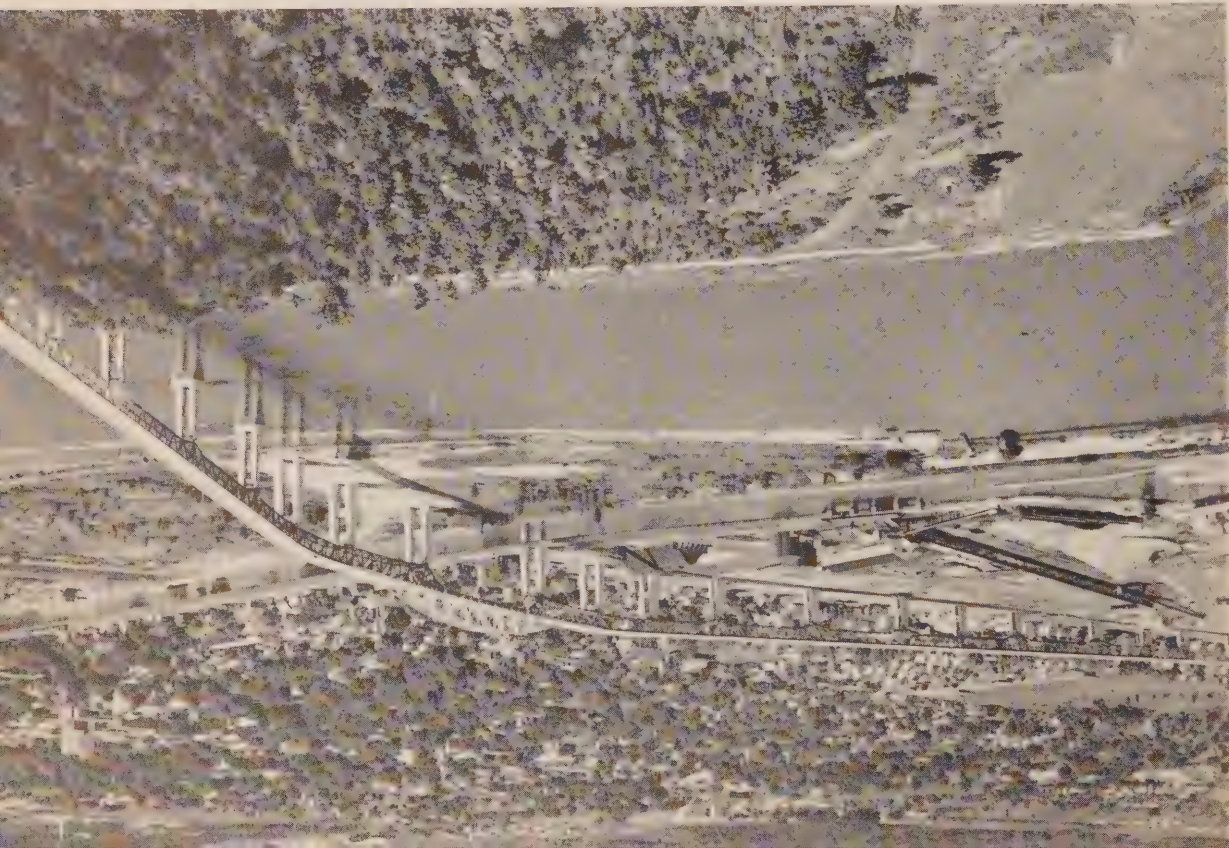
L'ouverture de la navigation dans le canal canadien de Sault-Sainte-Marie a eu lieu le 4 avril pour se terminer le 16 décembre.

se terminer le 15 décembre, le dernier navire à y passer dans le canal de Welland s'est ouverte le 1^{er} avril pour le 7 décembre. Ainsi qu'on l'avait annoncé, la navigation dernier navire descendant quittait cette dernière écluse le 7 décembre. Ainsi qu'on l'avait annoncé, la navigation descendants de franchir celle de Saint-Lambert. Le quois et à 18 navires océaniques et 15 d'eaux intérieures d'eaux intérieures remontants de franchir l'écluse d'Iro-annoncé la fermeture. Ce délai a permis à 28 navires jours après le 30 novembre, date pour laquelle on avait est demeurée ouverte, de jour en jour, durant quelques météorologiques favorables, la section du Saint-Laurent risé que le jour jusqu'à cette date. Grâce aux conditions explique que le passage du lac Saint-Louis n'était auto-

Région	Péages suspendus sur le canal de Welland à compter du 18 juillet 1962.	
	1960	1961
Saint-Laurent (Canada)	7,153,842	8,078,448
Saint-Laurent (États-Unis)	2,955,217	3,328,612
Welland	1,318,357	1,460,451
TOTAL	11,427,416	12,867,511
(1) Péages suspendus sur le canal de Welland à compter du 18 juillet 1962.	12,574,775(1)	

du présent rapport.

autres recettes diverses indiquées à la section financière



La travée de chenal nord du pont International de la voie maritime relie l'île de Cornwall à la terre ferme à Cornwall, Ontario.

p. 100 du trafic du canal de Welland et 5,9 p. 100 des denrées transportées se rangeaient dans la catégorie des marchandises diverses.

Une grande partie des cargaisons ayant transité dans le canal de Welland était composée de trafic transporté sur les lacs entre des ports canadiens et des ports des États-Unis. Les tableaux indiquent que 21,9 p. 100 des denrées ont été transportées entre des ports canadiens, 3 p. 100 entre des ports des États-Unis et 55,8 p. 100 entre un port des États-Unis et un port canadien. Le trafic d'importation et d'exportation en provenance et à destination de ports d'outre-mer composait le reste, soit 19,3 p. 100.

Le tableau suivant résume l'activité dans le canal de Welland:

	1960	1961	1962
Nombre de transits . . .	7,536	7,747	7,615
Jauge nette au registre . . .	23,924,407	27,739,846	29,293,035
Jauge brute au registre . . .	35,528,265	40,724,078	43,152,533
Cargaison — En vrac . . .	27,358,103	29,576,436	33,325,150
— Diverses . . .	1,891,586	1,878,367	2,081,155
Péages en dollars . . .	1,318,357	1,460,451	(1)

(1) Péages suspendus à compter du 18 juillet 1962 (voir le tableau des péages).

Tout comme dans la section du Saint-Laurent, le minéral de fer a été, selon la quantité transportée, la plus importante des denrées composant le trafic du canal de Welland et a représenté 29 p. 100 du trafic total de 1962. Le blé a passé de la première à la deuxième place et il a constitué 15 p. 100 du total; le charbon, qui arrive au troisième rang, a constitué 13,7 p. 100 du tonnage total. Le maïs a représenté 7,2 p. 100 du trafic et l'orge, l'avoine et l'huile combustible ont été les autres denrées importantes.

Denrées	1961	Pourcentage du total	1962	Pourcentage du total
Blé	7,218,003	22,9	5,303,163	15,0
Maïs	1,821,618	5,8	2,515,229	7,2
Orge	344,478	1,1	717,153	2,0
Avoine	898,772	2,9	1,293,678	3,6
Charbon	4,356,729	13,9	4,851,025	13,7
Minéral de fer	6,672,124	21,2	10,266,609	29,0
Bois à pâte	245,471	0,7	162,903	0,5
Huile combustible	831,211	2,6	891,595	2,5
Papier-journal	476,294	1,5	475,926	1,3
Toutes autres denrées	8,590,103	27,4	8,929,024	25,2
TOTAL	31,454,803	100,0	35,406,305	100,0

RAPPORT ANNUEL DE 1962

L'Administration de la voie maritime du Saint-Laurent remercie de leur collaboration au cours de l'année la *Saint Lawrence Seaway Development Corporation* des Etats-Unis, les ministères fédéraux et provinciaux, les différentes entreprises hydroélectriques du Canada et des Etats-Unis, les autres organismes publics ou privés, les journaux et, tout particulièrement, les sociétés maritimes responsables du trafic de la voie maritime.

Trafic

Le tonnage total des cargaisons qui ont emprunté les canaux du Saint-Laurent et le canal de Welland a atteint en 1962 un sommet sans précédent, soit environ 25,593,600 tonnes pour les canaux du Saint-Laurent et 35,406,305 tonnes pour celui de Welland.

A l'encontre du trafic de 1961 qui a comporté un trafic descendant considérable de blé vers les ports à marée, celui de 1962 a comporté des expéditions plus considérables de minerai de fer qui ont remonté les canaux. Le trafic descendant a continué d'être élevé en 1962 par suite de l'expédition d'autres grains à partir de la tête des Lacs jusqu'aux ports du bas Saint-Laurent, ce qui a contrebalancé les fortes expéditions de blé à destination des ports d'outre-mer effectuées en 1961.

Les cargaisons partant du Canada et (ou) y arrivant ont représenté 75 p. 100 du volume des cargaisons transportées durant la saison de navigation.

Section de Montréal au Lac Ontario

Les navires remontant et descendant cette section de la voie maritime y ont effectué 6,351 transits durant la saison de navigation de 1962 comparativement à 6,892 en 1961. La jauge brute au registre de tous les navires qui ont effectué ces transits représente 31,011,000 tonnes. Les cargaisons transportées par les navires remontants ont atteint 10,879,000 tonnes contre 14,714,000

Voici le rapport annuel publié par l'Administration de la voie maritime du Saint-Laurent pour l'année 1962, dans lequel elle rend compte de sa quatrième année d'exploitation de la voie navigable en eau profonde entre Montréal et le lac Érie.

Le rapport porte également sur l'exploitation et l'administration des autres canaux cédés à l'Administration par le ministère des Transports le 1^{er} avril 1959.

Des quatre saisons de navigation depuis l'inauguration de la voie maritime, c'est en 1962 que le volume du trafic a été le plus considérable. Le mois d'octobre a atteint un sommet sans précédent (3,873,000 tonnes) pour ce qui est du volume des cargaisons transportées au cours d'un mois quelconque par les navires ayant transité dans la voie maritime depuis l'implantation du réseau.

Le 5 juillet, les membres de la *Fraternelle canadienne des cheminot, Employés de Transport et Autres Ouvriers*, association avec laquelle l'Administration de la voie maritime du Saint-Laurent a conclu un contrat collectif, ont boycotté les navires montés par des membres de la *Seafarers International Union of Canada* et qui avaient présenté une demande en vue de transiter dans la voie maritime. Le même jour un navire a été placé à l'écluse n° 1 du canal de Welland et un autre à l'écluse n° 8 de manière à rendre impossible l'utilisation du canal. L'Administration a obtenu des tribunaux des provinces d'Ontario et de Québec des injonctions qui mirent fin au boycottage.

Le 18 juillet une Commission industrielle d'enquête sur la navigation dans le réseau des Grands lacs et du fleuve Saint-Laurent, présidée par l'honorable juge T. G. Norris, a été instituée aux termes de la Loi sur les relations industrielles et sur les enquêtes visant les différends du travail. Les audiences tenues à Ottawa, Toronto, St. Catharines et Montréal ont commencé en août et se poursuivaient encore à la fin de l'année.

Direction	1960	Hausse ou baisse	1961	Hausse ou baisse	1962	Hausse ou baisse
Trafic descendant	7,678,985	-20.4%	7,015,145	-8.7%	9,374,400	+33.6%
Traffic descendant	10,377,464	+15.2%	14,328,392	+38.1%	13,701,592	-4.4%
Total	18,056,449	-3.2%	21,343,537	+18.2%	23,075,992	+8.1%

Photographies: — L'écluse Saint-Lambert, la nuit — Gar Lunney, L'office National du Film.
 "Hercules" — Frank Reynolds, L'Administration de la voie maritime du Saint-Laurent.
 Pont — Alexander R. Onosko.
 Les écluses jumelées — Hunting Survey Corp. Ltd.

On peut se procurer un rapport détaillé sur le trafic de la voie maritime en 1962 chez l'Imprimeur de la Reine, n° de catalogue TS 2-2/1962, au prix de 75c. l'exemplaire.

On peut se procurer le Manuel des capitaines pour la voie maritime du Saint-Laurent, qui renferme les circulaires et le règlement relatifs au transit dans la voie maritime, chez l'Imprimeur de la Reine, n° de catalogue TS 2-163F, 1963 au prix de \$2.50 l'exemplaire.

En vente chez l'Imprimeur de la Reine à Ottawa, et dans les librairies du Gouvernement fédéral à Ottawa, Toronto et Montréal.

Des exemplaires sont à la disposition des intéressés dans toutes les bibliothèques publiques du Canada.

Prix: \$0.35

No. de Catalogue: TS 1-1963

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

R. J. RANKIN, président

PIERRE CAMU, vice-président

PERSONNEL DE DIRECTION

R. J. BURNSIDE.....*Directeur de l'exploitation*
L. H. BURPEE.....*Ingénieur en chef*
L.-A. COUTURE.....*Avocat-conseil*
P. E. R. MALCOLM.....*Secrétaire et directeur de l'administration*
J. M. MARTIN.....*Directeur des finances et de la comptabilité*

L'ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

Le 29 mars 1963.

L'Honorable Léon Balcer,
Ministère des Transports,
Ottawa, Ontario.

Monsieur,

Je vous présente ci-joint le rapport de l'Administration de la voie maritime du Saint-Laurent pour la période allant du 1^{er} janvier 1962 au 31 décembre 1962, en conformité du paragraphe (3) de l'article 85 de la Loi sur l'administration financière, chapitre 116, S.R.C. 1952.

Respectueusement,

Le Président,

R. J. RANKIN.

**RAPPORT
ANNUEL
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**L'ADMINISTRATION DE LA VOIE
MARITIME DU SAINT-LAURENT**



1962

L'ADMINISTRATION DE LA VOIE
MARITIME DU SAINT-LAURENT



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Government
Publications



(THE) ST. LAWRENCE SEAWAY
AUTHORITY

(ANNUAL)
REPORT
(1 9 6 3)



A detailed Traffic Report of the St. Lawrence Seaway for 1963 is available from the Queen's Printer, Cat. No. TS2-263 at 75 cents per copy.

The Seaway Handbook containing Circulars and Regulations for transit of the Seaway is available from the Queen's Printer, Cat. No. TS2-164 at \$5.00 per copy.

This Annual Report is available from the Queen's Printer, Ottawa and at Canadian Government bookshops at Ottawa, Montreal and Toronto. A deposit copy of this publication is also available for reference in public libraries across Canada.

Price: \$0.35

Catalogue No. TS 1-1963

THE ST. LAWRENCE SEAWAY AUTHORITY

March 31, 1964.

THE HONOURABLE J. W. PICKERSGILL,
Minister of Transport,
Ottawa, Ontario.

Dear Sir:

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1963 to December 31, 1963, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

R. J. RANKIN,

President.

THE ST. LAWRENCE SEAWAY AUTHORITY

R. J. RANKIN, President

PIERRE CAMU, Vice-President

PETER E. R. MALCOLM, Member

EXECUTIVE OFFICERS

R. J. BURNSIDE *Director of Operation*

L. H. BURPEE *Chief Engineer*

JOHN T. CARVELL *Counsel*

J. M. MARTIN *Director of Finance and Accounting*

T. J. QUIGG *Director of Administration*

L. E. BÉLAND *Secretary*

ANNUAL REPORT 1963

Publications

This is the annual report of The St. Lawrence Seaway Authority for the year 1963, including the fifth operating season of the deep waterway between Montreal and Lake Erie.

The report also covers the operation and administration of the other canals transferred from the Department of Transport to the Authority, April 1, 1959.

During the 1963 navigation season, traffic set a number of new records.

Cargo transiting the Montreal-Lake Ontario section was well over 30,000,000 tons and cargo transiting the Welland Canal section of the Seaway, between Lake Ontario and Lake Erie, exceeded 41,000,000 tons. Gross registered tonnage of the vessels transiting was the greatest for any season.

The total toll revenue accruing from this traffic (shared by Canada and the United States) exceeded \$15,000,000 in 1963.

With the opening of the navigation season of 1963, permissible draught on the channels between Montreal and Lake Ontario was increased six inches—to 25 feet six inches. The latter figure has been the permissible draught on the Welland Canal for some years.

In August, 1963, announcement was made that the Government had decided to proceed with the full twinning of the locks of the Welland Canal.

The St. Lawrence Seaway Authority expresses its thanks for the good co-operation received from the Saint Lawrence Seaway Development Corporation of the United States; Departments of Government, both Federal and Provincial; and the various power entities in Canada and the United States.

Traffic

Cargo traffic through Montreal-Lake Ontario Section and the Welland Canal Section of the St. Lawrence Seaway reached an all-time high in total volume during the 1963 navigation season.

Upbound traffic through the canals rose steadily due particularly to increased demands for iron ore from the lower St. Lawrence. The unprecedented large sales of Canadian wheat to overseas markets contributed to a heavy flow of downbound traffic, particularly in the movement of grain. Through the Welland Canal, coal is also an important product which is shipped from United States ports to the upper end of Lake Ontario.

Almost 31,000,000 tons of cargo moved through the Montreal-Lake Ontario Section of the Seaway while traffic through the Welland Section exceeded 41,000,000 tons.

Montreal—Lake Ontario Section

Upbound and downbound vessel transits through this section of the Seaway totalled 6,285 for the 1963 navigation season compared with 6,351 in 1962. The gross registered tonnage of vessels transiting exceeded 35,000,000.

Upbound cargoes weighed 13,540,000 tons, with 17,403,000 tons downbound, totalling 30,943,000 tons, and representing an increase in total traffic of 20.9% when compared with 1962, and 52.0% over that recorded for 1959, the first year the St. Lawrence Seaway was in operation.

Inland vessels made almost twice as many transits as did overseas ships and carried nearly three times as much of the total traffic.

Direct overseas trade by way of the Seaway involved 2,053 transits both ways and amounted to 8,014,000

Direction	Bulk Cargoes					
	1961	Increase or Decrease %	1962	Increase or Decrease %	1963	Increase or Decrease %
Upbound	7,015,145	— 8.7	9,374,400	+33.6	11,689,442	+24.7
Downbound	14,328,392	+38.1	13,701,592	— 4.4	16,312,653	+19.1
Total	21,343,537	+18.2	23,075,992	+ 8.1	28,002,095	+21.3

tons which was 11.1% lower than in 1962, but accounted for 25.9% of the total tonnage through the Section in 1963.

Inland trade vessels or lakers made 1,907 trips up-bound and 1,883 transits downbound, carrying cargoes of 22,895,000 tons—74.0% of all traffic. This represents an increase of 38.5% over 1962 in the total cargo traffic carried in inland vessels. A small number of transits were made by construction equipment and naval vessels not included in the above total.

Shipment of bulk cargo comprised 90.5% of the season total, or more than 28,002,000 tons compared with 23,075,000 tons in 1962. General cargoes, the balance of the traffic, amounted to 2,941,000 tons, 9.5% of the total and an increase of 16.8% over the 1962 amount.

The demand for iron ore increased shipments of up-bound bulk cargoes substantially in 1963 compared with 1962. An abnormal movement of grain during the last three months of the navigation season resulted in the increase in downbound bulk cargoes in 1963.

Shipments according to the origin or destination of the cargoes indicated that 31.4% of the total traffic through this section of the Seaway was between two Canadian ports, another 42.7% moved between Canadian and U.S. ports, 7.5% was overseas trade to and from Canada and 18.0% was overseas trade to and from the United States, while .4% of the commodities moving through the St. Lawrence section originated and terminated in the United States.

A comparative summary of the total upbound and downbound traffic for the Montreal-Lake Ontario Section is as follows:

Item	1961	1962	1963
No. of Transits . . .	6,892	6,351	6,285
Net Registered Tons .	18,931,388	20,272,318	22,872,972
Gross Registered Tons	28,908,578	31,011,461	35,030,711
Cargo — Bulk . . .	21,343,537	23,075,992	28,002,095
— General . . .	2,074,183	2,517,608	2,940,795
Toll Revenue \$. . .	11,407,060	12,574,775	15,122,282

The table below indicates the traffic for selected commodities through the Montreal-Lake Ontario Section of the Seaway in 1962 and 1963. Iron ore was the most important single product moving through this part of the Seaway, followed closely by a heavy volume of wheat. The total tons of iron ore increased by 35.6% over the 1962 figure, and represented 26.5% of all traffic. Wheat was second, showing an increase of 48.5% over 1962 or a total of 23.6% of all traffic. Corn, barley, fuel oil and coal were the other commodities accounting for a significant portion of the total cargoes.

Commodity	1962	Percent of Total	1963	Percent of Total
		%		%
Wheat . . .	4,903,785	19.2	7,283,313	23.6
Corn . . .	2,187,703	8.5	2,651,842	8.6
Oats . . .	685,501	2.8	529,456	1.7
Barley . . .	1,099,499	4.3	1,111,502	3.6
Coal . . .	1,185,609	4.6	973,419	3.1
Iron Ore . . .	6,014,788	23.6	8,159,273	26.5
Pulpwood . .	170,369	.7	179,752	.6
Fuel Oil . . .	1,239,956	4.8	1,284,396	4.2
Newsprint . .	311,594	1.2	314,170	1.0
All Other Commodities	7,794,796	30.3	8,455,767	27.1
TOTAL . . .	25,593,600	100.0	30,942,890	100.0

Welland Section

The pattern of traffic through the Welland Canal differs somewhat from the cargoes transiting the Montreal-Lake Ontario section of the Seaway. While many ships enter the Seaway from the Lower St. Lawrence and foreign ports and traverse both canals, there was, however, a substantial amount of local traffic between U.S. and Canadian ports on Lake Ontario and the Upper Lakes through the Welland Canal. These movements were made up largely of downbound shipments of iron ore and coal.

Vessel transits through the Welland were 3,828 up-bound and 3,769 downbound in 1963, a total of 7,597 compared with 7,615 in 1962. The total gross registered tonnage of these vessels was 48,048,000, an increase of 11.3% over the total for the previous year. Of the 48,048,000 gross tons, 14,297,000 gross tons or 29.7% were in ballast transits or vessels engaged in oneway traffic. Cargo tonnage amounted to 13,152,000 tons up-bound, an increase of 21.3%; and 28,151,000 down-bound, an increase of 14.6% over last year. Commodities classified as bulk shipments accounted for 94.1% of the Welland Canal traffic and 5.9% of the cargoes carried were listed as general, the same proportion as resulted in 1962.

A large percentage of the Welland Canal shipments was interlake traffic between Canadian and United States ports. Tabulations show 22.9% of the commodities were carried between Canadian ports, 2.4% between United States ports and 34.9% from U.S. to Canada and 24.3% from Canada to the U.S. United States import and export trade from and to overseas points accounted for 13.4%. Canadian import and export trade from and to overseas points accounted for 2.1%.

A general summary of the shipping activities on the Welland Canal is contained in the following table:

Item	1961	1962	1963
No. of Transits . . .	7,747	7,615	7,597
Net Registered Tons .	27,739,846	29,295,035	32,738,825
Gross Registered Tons	40,724,078	43,152,533	48,047,664
Cargo — Bulk . . .	29,576,436	33,325,150	38,867,266
— General . . .	1,878,367	2,081,155	2,436,213
Toll Revenue \$. . .	1,460,451	(1)	(1)

(1) Tolls suspended as of July 18, 1962, see tolls table.

Following the pattern of the St. Lawrence Section, iron ore was the most important commodity to transit the Welland from the point of view of quantity and constituted 30.9% of the total traffic for 1963. Wheat was in second place with 18.7% of the total, with coal the third most important product amounting to 12.2% of the total tonnage. Corn accounted for another 7.0% of the traffic, barley 3.3%, while other grains and fuel oil were also significant.

Commodity	1962	Percent of Total	1963	Percent of Total
		%		%
Wheat . . .	5,303,163	15.0	7,746,778	18.7
Corn . . .	2,515,229	7.2	2,911,253	7.0
Oats . . .	717,153	2.0	601,284	1.5
Barley . . .	1,293,678	3.6	1,357,261	3.3
Coal . . .	4,851,025	13.7	5,039,312	12.2
Iron Ore . . .	10,266,609	29.0	12,755,978	30.9
Pulpwood . .	162,903	.5	190,518	.5
Fuel Oil . . .	891,595	2.5	772,758	1.9
Newsprint . .	475,926	1.3	443,880	1.1
All Other Commodities	8,929,024	25.2	9,484,457	22.9
TOTAL . . .	35,406,305	100.0	41,303,479	100.0

Tolls

Toll assessment in 1963 amounted to a total of \$15,122,282, of which \$10,721,921 was collected in Canadian funds for The St. Lawrence Seaway Authority and \$4,400,361 in United States funds for the Saint Lawrence Development Corporation. Since tolls on the Welland Canal were suspended as of July 18th, 1962, no monies were assessed for traffic through this canal in 1963.

The following table shows the toll assessment of 1961, 1962 and 1963 but does not include charges for pleasure craft transits or other miscellaneous revenues shown in the financial section of this report.

Area	1961	1962	1963
	\$	\$	\$
St. Lawrence (Canadian Funds)	8,078,448	8,908,561	10,721,921
St. Lawrence (U.S. Funds)	3,328,612	3,666,214	4,400,361
Welland	1,460,451	640,193(1)	(1)
TOTAL	12,867,511	13,214,968(1)	15,122,282

(1) Tolls suspended on the Welland Canal as of July 18, 1962.

Traffic in Non-Toll Canals

The table below shows a summary of the traffic through canals operated by The St. Lawrence Seaway Authority which are generally designated as non-toll canals.

Canal and Direction	No. of Transits		Gross Registered Tons		Cargo Tons	
	1962	1963	1962	1963	1962	1963
Lachine:						
Up	715	606	581,238	445,819	39,453	34,357
Down	828	700	801,527	642,359	849,211	632,684
Total	1,543	1,306	1,382,765	1,088,178	888,664	667,041
Cornwall:						
Up	225	181	130,898	118,248	171,077	157,970
Down	221	174	130,975	117,512	—	—
Total	446	355	261,873	235,760	171,077	157,970
Sault Ste. Marie						
Up	1,079	1,005	2,138,327	1,616,487	361,531	209,166
Down	2,077	2,050	1,804,901	1,585,201	736,655	598,093
Total	3,156	3,055	3,943,228	3,201,688	1,098,186	807,259

OPERATION

Navigation in General

A few months after the Seaway opened in 1959 and throughout 1960, 1961 and 1962 vessels were permitted passage through the St. Lawrence section of the Seaway with a maximum draft of 25 feet. Extensive sweeping carried out during these four years indicated that the channels which were designed for a 27 foot depth of water were stable and were subject to minimum silting in the critical areas.

At the beginning of navigation in 1963, after consultation with shipping interests, the maximum permissible draft was increased 6 inches to 25 feet, 6 inches on the section of the Seaway from Montreal to Lake Ontario. This is the same draft which has been in effect on the Welland Canal since the Seaway opened in 1959. The increase of 6 inches in draft means that a large laker may carry about 600 tons of additional cargo.

Ice in Lake St. Louis delayed the start of buoy laying until April 13 which resulted in navigation being restricted to daylight hours in certain areas until April 20. However, the opening of the Seaway from Montreal to Lake Ontario was as scheduled with the first vessel passing through St. Lambert Lock on April 15.

Heavy ice conditions in Lake Erie off the entrance to Port Colborne Harbour hampered early navigation on the Welland Canal and although vessels began to move locally on April 1, the first vessel cleared through the Welland Canal on April 7.

Vessel movement during the season was consistently heavy. Favourable weather conditions in the late fall made it possible to continue navigation from Lake Ontario to Montreal beyond the formal closing date of November 30. The last vessel passed through St. Lambert Lock on December 13. With ice beginning to form on Welland Canal structures, the last vessel transited this canal on December 18.

The Sault Ste. Marie Canal opened as scheduled on April 4, but closed on November 30, about two weeks earlier than normal, so that the old wooden sill at the downstream end of the lock could be replaced in concrete during the non-navigation season.

Training

Briefing schools for operating personnel were held at Cornwall Headquarters and on the Welland Canal. The main purpose of the schools, which are conducted in the winter months, is to improve and standardize oper-

ating procedures throughout the Seaway. The very encouraging results achieved to date warrant their continuation.

Vessel Inspections

Seaway staff members as well as inspectors from the Department of Transport carry out many inspections to ensure the adequacy of equipment and the seaworthiness of vessels. The following is a summary of inspections carried out during the 1963 navigation season:

Seaworthiness	52
First Seaway transit	178
Re-inspections	161
Tows	19
	<hr/>
TOTAL	410

In addition to the above, the plans of some 250 vessels were submitted for examination to ensure compliance with Seaway requirements with respect to mooring equipment, landing booms and fendering.

Security

On August 22, a vertical lift bridge at Caughnawaga was damaged by explosives set by persons unknown. The structure was in the open position at the time and navigation was interrupted only for a few days. The Authority, in co-operation with the Royal Canadian Mounted Police, moved to establish a security system which relates both to the Eastern and Western Regions of the Seaway. Security lighting was installed at many of the structures and the area of security fencing has been increased.

Automation

In 1963, several locks and bridges were changed over to automatic push-button operation. This replaces manually controlled machinery movements by a series of automatic movements which, once set in train by the operator, continue automatically, each beginning upon the completion of the last. The control of lock and bridge operations can be very accurately carried out by such systems.

In the case of a vessel that has entered a lock down-bound and has already tied up to the lock wall, the lock operator simply pushes a button which causes the valves

to empty the lock, thereby lowering the vessel to the next level. At the appropriate time, the lower gates are automatically opened, the fenders protecting the lower gates are raised and the vessel may proceed.

Automation can be timed to ensure a rapid and smooth lockage for a ship, reducing human error to the minimum. During periods of exceptionally difficult conditions which may arise due to accidents or to ice, it will be necessary to return temporarily to skilled manual control and provision is made for these eventualities.

Accidents and Delays

Most of the delays to navigation were the result of adverse weather conditions such as high winds and fog. Bad weather resulted in the loss of 614 hours in 1963 as compared with 827 hours in 1962.

Equipment failures on locks, bridges and other structures accounted for a total of 153 hours delay, 92 hours of which were on the Welland Canal. This compares with a total of 49 hours delay, 17 hours of which were on the Welland Canal, recorded in 1962.

The following table is given to indicate the type of accident in which vessels were involved:

<i>Type of Accident</i>	<i>Number of Vessels</i>
Collision (8 accidents)	17
Vessels striking bridges	15
Vessels striking fender booms at locks	4
Vessels striking lock and approach walls	38
Vessels striking breast walls	0
Groundings (vessels outside channel limits)	19
TOTAL	93

On the St. Lawrence Section, 32 vessels were involved in minor incidents resulting in approximately 4 hours of delay and on the Welland there was a total of 61 vessel accidents resulting in 53 hours of delay.

A breakdown of these statistics shows that on the Welland Canal 3 inland vessels per 1,000 passages were involved in accidents which is the same as the ratio for the previous year. However, the number of ocean vessels involved in accidents shows an increase to 20 per 1,000 in 1963 compared to 13 in 1962. It is noted that accidents involving ocean ships were individually less serious than those of inland ships.

Improvements

The following are examples of the many improvements carried out to assist navigation:

- a) Sodium lights were installed to mark the ends of tie-up walls. The light is a very bright yellow which stands out from the many lights in a lock area, thereby greatly assisting navigators in precisely locating the walls at night.
- b) Thirty-four additional mooring bollards were installed between Bridges 12 and 13 on the Welland Canal.
- c) The installation of emergency mooring facilities above Caughnawaga Bridge was nearly completed.
- d) A new public address system was placed in operation on several of the locks permitting the lock master to communicate audibly with ships' officers from any location on the mile-long lock structures and to assist him in directing the work of the lock crews.
- e) A great deal of testing has been carried out to develop an improved navigation control light for bridges.
- f) Improved mooring facilities were built at the upper ends of Locks 4 and 5 on the Welland Canal to provide more positive mooring for the larger vessels.

Maintenance

Intensive inspection of all structures and operating devices to prevent premature break down formed a large part of the preventive maintenance program. Included in the inspection were all open and enclosed gear trains, rotating screws, cables, guides and other movable and stationary parts of the electrical and mechanical devices used to operate bridges, valves, gates, fenders, regulating works and pumping stations.

Floating plant including tugs, sounding sweeps, gate-lifters, derrick scows and work boats were periodically inspected and tested to meet the safety and mechanical standards of steamship inspections.

To provide for extended navigation seasons and prevent damage to lock gates when operated, air bubbler systems were fabricated, installed and located, so as to decrease ice buildup on mitre gates and clear floating ice from these areas.

S.L.S. "Hercules"

The Authority's 275-ton capacity self-propelled, floating, revolving crane, the S.L.S. "HERCULES",

went into service early in the year and was used on several occasions for heavy lifts in the Port of Montreal.

Hydraulics

Water flow lines were determined at various locations to show current patterns and to study their effect on navigation.

ENGINEERING

Mooring Facilities, Caughnawaga

A contract was let in July, 1963, for the provision of facilities for mooring vessels in the canal at the upstream approach to the Canadian Pacific Railway twin lift bridges at Caughnawaga. This was to overcome difficulties of ship control under adverse wind conditions should there be a delay in opening the bridges. Work under the contract was completed in November, but the construction of the floating parts of the structure was undertaken by the Authority's canal forces as a winter project. It is expected that the whole work will be completed early in the summer of 1964.

Timber Fenders on Lock Entrance Walls

The program of installing timber and butyl rubber fenders on lock entrance walls was completed in 1963 with the installation of the fenders at the Iroquois Lock and on the northwest wall at Lock 8 on the Welland Canal.

Modifications and Improvements

Lock Gates

As a result of studies made of the operating features of lock gates in the St. Lawrence Section, two contracts were awarded to cover improvements to the sector gate rollers and to the gate operating machines.

Counterweight Sheaves in Vertical Lift Bridges

The design for a modified counterweight sheave for the St. Louis and Valleyfield bridges was completed. During the winter of 1962-63 the sheaves were removed, the modifications carried out and the sheaves reinstalled.

Beauharnois Tunnel

To eliminate the momentary blindness experienced by drivers entering the Beauharnois tunnel at high speed on sunny days, white paint was applied to the walls of

Water level gauging and flow measurements were carried out throughout the year primarily to ensure an adequate depth of water for navigation purposes. These measurements also assist in controlling the flow of water through the canals to prevent flooding and to ensure an adequate supply of water for power generation, municipal water supplies and other leased water rights.

the tunnel inside the entrances and black paint was applied outside the portals. At the same time large overhead signs were installed at the approaches limiting the speed to 35 miles per hour.

Rehabilitation of Bridges—Lachine Canal

The program of major repairs and modifications made necessary by the wear and corrosion on the bridges across the Lachine Canal is continuing. The extensive repairs and reconditioning of Black's Bridge (No. 1) commenced in 1962, was completed during the current year, and a contract was let for the repair and rehabilitation of Des Seigneurs Street Bridge (No. 3). Work on the latter was virtually complete at year's end.

Repair of Bridge Damage

Twin C.P.R. Lift Bridges at Caughnawaga

Early in the morning of August 22, 1963 the upstream bridge was damaged by explosives, set by persons unknown. Fortunately conditions were such that no delay was imposed on either ship or rail traffic other than that necessary to inspect the damage and assure the safety and workability of the alternate bridge. Emergency repairs were carried out by the original fabricator, and the bridge was restored to service the following month.

Landscaping

This program was continued at the lock areas and at the Seaway International Bridge during 1963.

About 1,700 trees and shrubs have been planted in the St. Lambert Lock area. The graded and sodded areas at Côte Ste-Catherine were extended to include the strip between the highway and the regulating by-pass channel. Further grading and seeding of spoil areas and the south channel bridge approach embankment on Cornwall Island were undertaken.

Welland Canal

Channel Improvement and Slope Stabilization Between Locks 3 and 4

A contract involving the excavation of 500,000 cubic yards of clay and rock, awarded in October, 1962, was completed in the spring of 1963.

Channel Improvement and Slope Stabilization North of Bridge 15

A contract for the enlargement of the canal prism and improvement of the alignment north of Bridge 15 was let in February, 1963. Work was completed early in the summer.

Improvement of Unwatering Facilities at Twin Locks 4

No satisfactory arrangement existed for emergency unwatering of these locks singly. To remedy this, alterations in the lock entrance were undertaken. These comprised the removal of the old timber gates and the substitution of stop logs with the necessary gains and derrick, and the provision of high capacity pumps for quick unwatering of either lock. The work commenced late in 1962 and was completed by the end of 1963.

Improved Mooring Facilities Locks 4 and 5

Difficulties have been experienced in placing mooring lines for longer vessels at the upper ends of Locks 4 and 5 on the Welland Canal. Since the number of such longer vessels is increasing every year, remedial measures were undertaken prior to the opening of the 1963 navigation season. These comprised the cutting of galleries in the lock walls and the installation of additional mooring bollards to provide a better angle for the bow or stern lines of upbound or downbound vessels.

Pondage Above Lock 7 and Reclamation of Marlatt's Pond

Further enlargement of the pondage above Lock 7 continued during the year. Filled areas of Marlatt's Pond were seeded with grass.

Restoration of Valves at Welland Locks

Improvements were carried out on selected valves at the Welland locks in connection with operating problems.

Examinations of Existing Welland Bridges

Extensive examinations were made of most of the twenty movable bridges on the Welland Canal, all of which have been in service for over 30 years. Two of the vertical lift bridges were selected for general repairs and restoration during the non-navigation season 1963-64.

Rehabilitation of Bridge across the Welland River at Chippawa

The reconditioning of the old bascule bridge across the Welland River at Chippawa and its conversion to a fixed span, commenced in the winter of 1961-62 as a winter works program, was carried over into the following winter and completed in the spring of 1963.

Hydraulic Investigations and Tests to Improve Lock Operations

The program of testing and research, instituted in 1960, to develop methods of improving the efficiency of lock operation was continued during 1963. The semi-automatic system of push button control of the locking operations was extended to include Locks 1, 2 and 3 of the Welland Canal. This system ensures a uniform sequence of operation of valves at the established optimum for efficiency, reducing the lock filling time to less than 12 minutes.

Tests were commenced at the Côte Ste. Catherine Lock to study the behaviour of sector gates under varying conditions of flow, and their action in shutting off such flows. The purpose of these tests is to develop improvements in design for the sector guard gates to be installed at the upstream entrances of the Welland Canal locks.

Studies of hydraulic design continued in connection with the proposed new Welland locks and weirs and necessary modifications in the existing locks to suit the changed conditions.

Study of Causeway at Cardinal, Ontario

Studies have been continued for possible improvements in access facilities for the Town of Cardinal following the abandonment of the old 14-foot canal.

1967 World's Fair Site

The planned development of this site by the City of Montreal includes the enlargement of St. Helen's Island and Ile Ronde in Montreal Harbour, and the construction of a new island adjacent to the Seaway dyke below Victoria Bridge.

The Authority is assisting the City and the World's Fair organization by making available any pertinent subsurface information and water level records. The Authority has a prime interest in ensuring that no work relating to the fair shall have an adverse effect on Seaway installations or traffic.

The Seaway Authority is represented on a Federal Interdepartmental Committee responsible for approval of features in the planning of the site which could affect water levels.

ADMINISTRATION

PERSONNEL

Two labour agreements with the Canadian Brotherhood of Railway, Transport and General Workers, covering approximately 1,100 workers, expired on December 31, 1963. Negotiations for new agreements will begin early in 1964.

Authority officers participated in staff training and development courses sponsored by the Civil Service Commission and various government departments, in

the field of management techniques, records administration, work simplification, forms design and control.

As of December 31, 1963, total personnel numbered 1,374, an increase of 46 over December 1962.

The members of the Authority take pleasure in expressing their appreciation for the loyal and effective services rendered by the officers and employees of the Authority.

TOLLS AND STATISTICS

The division of the toll dollars as provided in the Seaway Tariff of Tolls is shown on the invoices issued and the representatives or owners are required to prepare cheques in Canadian and United States funds as indicated.

No major revisions were made in toll assessment procedure during the year and all forms required from the representative were completed and received prior to the closing date set by the Authority. In-transit car-

goes as defined in the regulations were declared toll free upbound in 1962. Exemption from toll was extended to in-transit cargo both upbound and downbound, in 1963.

During the navigation season, regular monthly press releases and traffic statistic reports are published. A complete survey of Seaway traffic is prepared for public distribution annually. See "Traffic Report of the St. Lawrence Seaway", frontispiece.

PURCHASES AND STORES

A program of disposal of surplus material and equipment continued throughout the year.

Purchases to the value of approximately \$2,000,000 were made during the year.

A house flag was designed. Blue with white, it features the Authority's symbol. It is flown on Authority owned buildings and ships.

PUBLIC INFORMATION

The Authority provides a variety of information services—to users, to the press, Government departments and public bodies by means of releases and announcements and to specific inquirers, both public and private, in Canada and abroad.

Co-operation is extended and organizational work done in conjunction with various departments and organizations, in connection with special visits and in regard to public ceremonies in which the Seaway is involved.

Over 5,000 requests for public information were answered in 1963. To most inquirers a kit of information is provided, but many require considerable research

and the preparation of special articles in a number of cases.

The place of the Seaway in the life of the country receives continuing recognition by educational authorities, and inquiries from students, teachers and university instructors, both in and outside Canada are answered fully and promptly.

The Seaway Handbook, the St. Lawrence Seaway Traffic Report and this report are prepared by Authority staff. The first two are published in conjunction with the United States entity, the Saint Lawrence Seaway Development Corporation.

LEGAL

In connection with the carrying out of its purposes and operations, the Authority controls considerable areas of canal land in the Provinces of Quebec and Ontario.

Certain lands, and privileges over other lands, where the land is not immediately required in connection with the operations of the Authority, are conveyed to interested parties under leases and licenses at an appropriate rental.

An extensive program of rental revision has been underway for two years.

Accordingly, during the year 1962, the total rental revenue was \$734,085, and this revenue increased for the year 1963 by \$51,388 to a total of \$785,473.

The impact of this rental revision program should continue to be reflected in increased rental revenue over the next couple of years.

FINANCIAL SECTION

The Authority's Balance Sheet as at December 31, 1963 and Statement of Income and Expenditure for the year ended on that date, as reported upon by the Auditor General, is appended to this report.

A statement of sources of funds and their utilization for the year 1963 and for the period from the commencement of Seaway construction to 31st December 1963 follows:

(in thousands of \$)		
	Year 1963	Cumulative 1st August 1954 to 31st December 1963
Source of Funds		
Loans and other indebtedness		
Loans under Sec. 25 of the Act	\$ 7,000	\$341,500
Temporary loans under Sec. 26 of the Act	8,000	8,000
Interest deferred	16,873	66,261
	<u>31,873</u>	<u>415,761</u>
Proceeds from disposal and other realization of capital assets	41	878
Provision for replacement of capital assets	961	4,566
Miscellaneous	2	242
	<u>\$32,877</u>	<u>\$421,447</u>
Utilization of Funds		
Capital assets — gross additions		
Cost of construction or acquisition	\$15,583	\$347,113
Interest during construction	70	17,615
	<u>15,653</u>	<u>364,728</u>
Net loss	13,690	51,625
Net current assets (1963 — increase)	3,534	5,094
	<u>\$32,877</u>	<u>\$421,447</u>

\$535 million. The purpose of the amendment was to provide \$180 million for the twinning of the Welland Canal and an additional \$10 million to enable the Authority to make a payment of \$11,752,504, under the authority of P.C. 1963-572 and 1963-1140, to the Canadian National Railways in connection with costs of track diversion and rearrangement of the approaches to Victoria Jubilee Bridge. This amount has been paid and is included in costs of construction for 1963.

After the amendment of the Act, temporary borrowings of \$8 million from the Minister of Finance were arranged under Section 26 in order to enable the above payment to be made before December 31st and to finance preliminary expenditures on twinning the Welland Canal. These short term borrowings will be repaid out of the proceeds of long term borrowings under Section 25 of the Act when moneys have been made available by Parliament for these purposes.

At 31st December 1963, as shown in the statement above, the Authority's debt (borrowings plus deferred interest) aggregated \$415,761,000 which is allocated as follows:

(in thousands of \$)						
	Capital Assets			Other Net Assets	Accumulated Deficits	Total Debt
	Gross	Reserves	Net			
St. Lawrence River Section	\$318,205	\$2,529	\$315,676	\$1,674	\$30,479	\$347,829
Welland Canal Section	36,733	1,699	35,034	3,224	20,802	59,060
Cornwall North Channel Bridge	8,554	26	8,528	—	344	8,872
	<u>\$363,492</u>	<u>\$4,254</u>	<u>\$359,238</u>	<u>\$4,898</u>	<u>\$51,625</u>	<u>\$451,761</u>

Borrowings

Under the terms of the St. Lawrence Seaway Authority Act as amended during 1963, the limit of the Authority's borrowing power was increased from \$345 million to

Of the above debt, \$349,500,000 is represented by loans. Deferred interest accounts for a total of \$66,261,000 of which \$51,625,000 represents accumulated deficits and the balance of \$14,636,000 is included in interest during construction added to the cost of capital assets.

Order-in-Council P.C. 1963-1912 of 27th December 1963 provides for the repayment of the principal amount of loans under Sec. 25 of the Act together with interest now accrued or accruing up to December 1964 in forty-five equal annual instalments, including current interest thereon, during the years 1965-2009 inclusive. The financial obligations of the Authority and possible re-arrangements thereof are however under examination.

Capital Expenditures

Costs of \$2,216,000 for twinning the Welland Canal, including \$1,398,000 in 1963, have been incurred up to December 31st, 1963.

During 1963 total expenditures of \$15,653,000 (including \$70,000 for interest during construction) were made on capital assets. These expenditures included 1963 costs for the Welland twinning (see above), the payment of \$11,753,000 to Canadian National Railways in connection with the Victoria Jubilee Bridge, \$1,245,000 for construction and improvements to the St. Lawrence Section, \$1,232,000 for improvements to the Welland Section and an investment of \$25,000 in the Seaway International Bridge Corporation Limited.

St. Lawrence River Section

The Authority assesses and collects toll revenues accruing to the Saint Lawrence Seaway Development Corporation as well as to itself. During 1963 tolls assessed on behalf of the Development Corporation amounted to U.S. \$4,403,000 (1962 — U.S. \$3,667,000).

The tolls assessed by the Authority on its own behalf in 1963 amounted to Cdn \$10,730,000 (1962 — Cdn \$8,914,000).

As there was no change in the tariff of tolls the increased revenues recorded above result entirely from increases in traffic commented upon in an earlier section of this report.

Cornwall North Channel Bridge

Prior to July 3rd, 1962 the Cornwall-Roosevelt International Bridge was operated on behalf of the Authority and the Saint Lawrence Seaway Development Corporation by the Cornwall International Bridge Company, Ltd. With the opening of the new North Channel Bridge, which was built by the Authority, and pending the incorporation of a new subsidiary of the Authority to assume the toll bridge operation which was agreed upon by the two Seaway entities in June 1962, the interim toll bridge operation was assigned to The St. Lawrence Seaway Authority Bridge Division. This interim arrangement continued in force until December 31, 1962.

On January 1st, 1963 management of the toll bridge operation was assumed by the Seaway International Bridge Corporation Limited. For 1963, in accordance with the arrangements between the two Seaway entities, the Authority has received from the Bridge Corporation the amount of \$193,000 as a contribution to the amortization of the cost of the new North Channel Bridge and the interest thereon. The interest on the Authority's investment in the Bridge amounted to \$428,000 and there was therefore an increase of \$235,000 in the recoverable investment.

Non-Toll Canals

In addition to operating the Seaway, which consists of the deep water canals of the St. Lawrence River and Welland Sections, the Authority operates non-toll canals and other properties at Lachine, Cornwall, Sault Ste. Marie and the Niagara Peninsula on behalf of the Government of Canada. The net expenditures on these properties and canals are recovered out of Parliamentary appropriations. In 1963 expenditures amounted to \$4,139,000 (1962—\$4,946,000), of which \$164,000 (1962—\$75,000) were capital expenditures. Offsetting these expenditures was 1963 income of \$574,000 (1962 —\$610,000). The increase in expenditures is substantially accounted for by heavy major maintenance on Lachine Canal Bridges and by special grants to the township of Wainfleet (\$53,000) and County of Haldimand (\$520,000) in connection with their assumption of responsibility for former Third Welland Canal properties no longer required for navigation purposes.

FINANCIAL SECTION

FINANCIAL HIGHLIGHTS (in millions)

Year	Cargo Tons	Revenue		Expenses	Replace- ment Prov.	Net Optg. Profit	Interest	Loss for year	Accum. Deficit	Debt (1) at Year-End
		Tolls	Misc.							
St. Lawrence River Section										
*1959	20.6	\$7.1	\$0.3	\$1.4	\$0.3	\$5.7	\$7.4	\$1.7—	\$1.7—	\$281.3
1960	20.3	7.2	0.1	2.1	0.4	4.8	11.5	6.7—	8.4—	297.3
1961	23.4	8.1	0.1	2.3	0.5	5.4	12.7	7.3—	15.7—	314.6
1962	25.6	8.9	0.2	2.9	0.5	5.7	13.6	7.9—	23.6—	328.6
1963	30.9	10.7	0.3	3.1	0.5	7.4	14.3	6.9—	30.5—	347.8

*Operating Expenses and Interest are for nine months.

Welland Canal Section

1959	27.5	\$1.2	\$0.6	\$2.4	\$0.2	\$0.8—	\$0.7	\$1.5—	\$1.5—	\$ 26.6
1960	29.2	1.3	0.7	3.8	0.3	2.1—	1.2	3.3—	4.8—	33.9
1961	31.5	1.5	0.7	4.5	0.4	2.7—	1.5	4.2—	9.0—	40.5
*1962	35.4	0.6	0.8	4.4	0.4	3.4—	1.8	5.2—	14.2—	45.9
1963	41.2	—	0.8	4.9	0.4	4.5—	2.1	6.6—	20.8—	59.1

*Welland tolls were suspended on July 18th, 1962.

Cornwall North Channel Bridge

1959	—	—	—	—	—	\$—	\$—	\$—	\$—	\$ 2.1
1960	—	—	—	—	—	—	—	—	—	3.3
1961	—	—	—	—	—	—	—	—	—	6.6
*1962	—	—	—	—	—	0.1	0.2	0.1—	0.1—	8.5
1963	—	—	—	—	—	0.2	0.4	0.2—	0.3—	8.9

*Bridge opened July 3rd, 1962.

(1) Debt equals borrowings plus deferred interest.

THE HONOURABLE J. W. PICKERSGILL,
MINISTER OF TRANSPORT,
OTTAWA.

Sir,

I have examined the accounts and the following financial statements of The St. Lawrence Seaway Authority for the year ended December 31, 1963:

Balance Sheet	
Statement of Income and Expense for the year ended December 31, 1963	
Statement of Expense for the year ended December 31, 1963	Schedule A
Capital Assets at December 31, 1963	Schedule B
Non-toll Canals	
Statement of Expense, Income and Capital Expenditures for the year ended December 31, 1963	Exhibit I

Section 25 of the St. Lawrence Seaway Authority Act provides that the Minister of Finance, with the approval of the Governor in Council, may from time to time make loans to the Authority. Section 13 of the Act, as amended, states that the aggregate of the amounts so borrowed under the Act and outstanding shall not at any time exceed \$535,000,000.

The accompanying balance sheet shows that the Authority was indebted to the Government of Canada on December 31, 1963 in respect of loans and deferred interest in the total amount of \$415,761,051, made up as follows:

Loans under section 25 of the Act	\$341,500,000
Temporary loans under section 26 of the Act	8,000,000
Interest to December 31, 1959—deferred	19,427,117
Interest for the year 1961—deferred	14,288,940
Interest for the year 1962—deferred	15,671,951
Interest for the year 1963—deferred	16,873,043
	<u>415,761,051</u>

Under the provision of section 16 of the St. Lawrence Seaway Authority Act, tolls are to be "designed to provide a revenue sufficient to defray the cost to the Authority of its operations", which costs are defined as including payments in respect of the interest on amounts borrowed by the Authority and amounts sufficient to amortize the principal of amounts so borrowed over a period not exceeding fifty years. The original conditions under which loans were made to the Authority under section 25 of the Act required the payment only of interest in the first three full years of operation (through the year ending December 31, 1962) and thereafter payment of annual amounts sufficient to amortize over a period of forty-seven years (or by December 31, 2009) all loans and interest thereon. The terms of the Authority's financing arrangements were amended in 1961 and again in 1963 and now call for repayment of all loans together with interest previously deferred and all other interest accrued or accruing up to December 31, 1964, together with current interest thereon, in forty-five equal annual instalments commencing December 31, 1965.

In accordance with these financial arrangements the year's operations have been charged with interest amounting to \$16,803,405 (an addition amount of \$70,381 was included in construction costs), but this interest has not been paid and is included in the balance sheet as part of the Proprietary Equity of the Government of Canada. There was no charge to the year's operations with respect to amortization of the principal of the amounts borrowed.

The costs of operating and maintaining the canals and works under the administration of the Authority are defined under paragraph (c) of section 16 as including all operating costs of the Authority and such reserves as may

be approved by the Minister. The Authority is of the opinion that it is not necessary to include depreciation as an element of operating and maintenance cost and that the amortization over the fifty-year period of the principal of the amounts borrowed together with interest as required by subsections (a) and (b) meets the requirements of the Act. Accordingly, no provision for depreciation has been included in the costs of the year under review.

Provision has been made during the year under review toward the cost of replacing machinery and equipment, including lock, bridge and building machinery and equipment, in the amount of \$961,254. The Reserve for Replacement of Machinery and Equipment as thus augmented amounted to \$4,254,283 at December 31, 1963.

No provision has been made in the accounts for the replacement of buildings, lock gates and lock and bridge structures. The Authority considers that these Seaway works can be maintained in working condition at all times under its maintenance programme.

In compliance with the requirements of section 87 of the Financial Administration Act, I report that, in my opinion, subject to the above observations:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statements of the Authority
 - (i) were prepared on a basis consistent with that of the preceding year, and are in agreement with the books of account,
 - (ii) in the case of the balance sheet, give a true and fair view of the state of the Authority's affairs as at the end of the financial year, and
 - (iii) in the case of the statement of income and expense, give a true and fair view of the income and expense of the Authority for the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

A. M. HENDERSON,
Auditor General of Canada.

ASSETS

	1963	1962
Current Assets:		
Cash	\$ 345,697	\$ 211,343
Treasury bills of Canada and short-term bank deposits	5,173,225	1,898,611
Accounts receivable (less provision for doubtful accounts)	356,613	622,324
Due from Government of Canada re non-toll canals (Exhibit I).	557,224	70,192
Inventories of materials, minor equipment and shop work in progress, at cost (less reserve for obsolescence)	599,274	675,718
Total Current Assets	7,032,033	3,478,188
Bonds and Cash held as Contractors' Security Deposits and Toll Guarantees (contra)	398,740	450,979
Investment in and Loans to The Seaway International Bridge Corporation, Ltd.	25,000	—
Capital Assets: (Schedule B)		
Acquired by the Authority, at cost		
St. Lawrence River section	318,179,748	305,361,958
Welland Ship Canal improvements	36,732,586	34,099,806
Cornwall North Channel bridge	8,554,432	8,443,350
	363,466,766	347,905,114
Entrusted to the Authority, at transfer values		
Welland Ship Canal (less disposals)	130,522,051	130,548,637
Non-toll canals and other properties.	49,846,782	49,766,478
	180,368,833	180,315,115
Total Capital Assets	543,835,599	528,220,229
	\$551,291,372	\$532,149,396

The appended notes form an integral part of this statement.

Certified correct:

J. M. MARTIN
Director of Finance and Accounting

Approved:

R. J. RANKIN
President

SEAWAY AUTHORITY

(The Seaway Authority Act)

December 31, 1963

at December 31, 1962

LIABILITIES

	1963	1962
Current Liabilities:		
Accounts payable and accrued liabilities	\$ 1,723,631	\$ 1,588,141
Due to Saint Lawrence Seaway Development Corporation re tolls.	56,614	35,835
Contractors' holdbacks	158,167	294,581
Total Current Liabilities	1,938,412	1,918,557
Contractors' Security Deposits and Toll Guarantees (contra)	398,740	450,979
Reserve for Replacement of Machinery and Equipment	4,254,283	3,342,878
Proprietary Equity of the Government of Canada:		
Capital Assets entrusted to the Authority by the Governor in Council		
under section 14 of the Act	180,563,672	180,483,368
Loans under section 25 of the Act.	341,500,000	334,500,000
Temporary loans under section 26 of the Act	8,000,000	—
Interest on loans — payment deferred	66,261,051	49,388,008
	596,324,723	564,371,376
Deduct: Deficit —		
Balance at beginning of year	37,934,394	
Add: Loss for the year, per Statement of Income and Expense	13,690,392	
Balance at end of year	51,624,786	37,934,394
Net Equity	544,699,937	526,436,982
	<u>\$551,291,372</u>	<u>\$532,149,396</u>

I have examined the above Balance Sheet and the related Statement of Income and Expense and have reported thereon under date of March 25, 1964 to the Minister of Transport.

A. M. HENDERSON
Auditor General of Canada

THE ST. LAWRENCE SEAWAY AUTHORITY

Notes to Balance Sheet

1. Outstanding commitments under uncompleted contracts as at December 31, 1963 amounted to approximately \$700,000.
2. Two claims for additional compensation totalling \$385,000, received from contractors in respect of completed contracts, remained unsettled at December 31, 1963. The Authority's offer of \$36,000 in settlement of one claim for \$188,000, made with the approval of Treasury Board, has been rejected by the contractor who has filed an action against the Authority claiming \$254,000 and interest.
3. The liability of the Authority with respect to compensation for properties under expropriation at December 31, 1963 is estimated by the Authority as amounting to \$1,500,000.
4. In accordance with the provisions of Order in Council P.C. 1963-1912 of December 27, 1963 the principal amount of loans received under section 25 of the St. Lawrence Seaway Authority Act to finance construction of the Seaway, together with interest previously deferred and all other interest now accrued or accruing up to December 31, 1964, is to be repaid, together with current interest thereon, in forty-five equal annual instalments commencing December 31, 1965.
5. The Reserve for Replacement of Machinery and Equipment amounting to \$4,254,283 at December 31, 1963 represents the accumulated provision for replacement of assets which the Authority considers will require replacement. No provision has been made in the accounts for the replacement of buildings, lock gates, and lock and bridge structures. The Authority considers that these Seaway works can be maintained in working condition at all times under its maintenance programme.

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Income and Expense for the year ended December 31, 1963

(with comparative figures for the year ended
December 31, 1962)

	1963	1962
Income		
Tolls assessed	\$10,730,418	\$ 9,555,641
Rentals	453,947	429,548
Wharfage	136,268	177,668
Cornwall-Rossevelt international bridge — net income	193,351	121,107
Interest	172,387	46,412
Miscellaneous	358,853	385,325
	<u>12,045,224</u>	<u>10,715,701</u>
Expense (schedule A)		
Operation and maintenance	6,231,213	5,626,022
Headquarters administration	1,207,123	1,290,257
Regional administration	699,966	712,873
Engineering	576,759	557,573
	<u>8,715,061</u>	<u>8,186,725</u>
Less:		
Portion of administration and engineering expense applicable to non-toll canals	461,986	373,981
Engineering expense allocated to other accounts	282,750	442,392
	<u>744,736</u>	<u>816,373</u>
	<u>7,970,325</u>	<u>7,370,352</u>
Net operating income before providing for interest and for replacement of machinery and equipment	<u>4,074,899</u>	<u>3,345,349</u>
Interest on loans from Government of Canada (not including \$70,381 added to construction costs)	16,803,405	15,396,959
Interest on contractors' claims and other accounts	632	163,848
Provision for replacement of machinery and equipment	961,254	888,554
	<u>17,765,291</u>	<u>16,449,361</u>
Net loss for the year	<u>13,690,392</u>	<u>13,104,012</u>

THE ST. LAWRENCE SEAWAY AUTHORITY

Statement of Expense for the year ended December 31, 1963

(with comparative figures for the year ended
December 31, 1962)

	<u>1963</u>	<u>1962</u>
Operation and maintenance:		
Salaries and wages	\$3,837,642	\$3,524,746
Employee benefits	412,524	365,132
Major maintenance materials and services	712,329	546,170
Bridge operating services by railway companies	157,715	148,875
Security guards	37,764	—
Other materials and services	690,472	680,725
Grants in lieu of municipal taxes	382,767	360,374
	<u>6,231,213</u>	<u>5,626,022</u>
Headquarters administration:		
Salaries of members and executive officers	111,260	109,240
Other salaries	779,453	817,508
Employee benefits	75,042	96,001
Office expenses	45,042	58,203
Travel and removal	33,221	37,841
Communications	31,391	28,296
Grants in lieu of municipal taxes	28,751	30,515
Rental of office machines	28,276	29,052
Office accommodation	22,395	21,091
Provision for doubtful accounts	6,895	11,418
Miscellaneous	45,397	51,092
	<u>1,207,123</u>	<u>1,290,257</u>
Regional administration:		
Salaries and wages	559,249	579,845
Employee benefits	57,463	60,067
Office expenses	27,299	31,078
Travel	13,501	12,554
Miscellaneous	42,454	29,329
	<u>699,966</u>	<u>712,873</u>
Engineering:		
Salaries and wages	427,336	410,169
Employee benefits	41,924	42,490
Office expenses	25,870	24,405
Travel	19,175	17,982
Miscellaneous	62,454	62,527
	<u>576,759</u>	<u>557,573</u>
Total expense	<u>8,715,061</u>	<u>8,186,725</u>

THE ST. LAWRENCE SEAWAY AUTHORITY

Capital Assets as at December 31, 1963

(with comparative figures as at December 31, 1962)

	Acquired by the Authority				Entrusted to the Authority			Totals	
	St. Lawrence River Section	Welland Ship Canal	North Channel Bridge	Sub- Total	Welland Ship Canal	Non-toll Canals		1963	1962
Land	\$ 8,539,059	\$ 1,174,137	\$ 501,804	\$ 10,215,000	\$ 1,923,034			\$ 12,138,034	\$ 10,693,309
Buildings	1,737,228	18,736	1,005,004	2,760,968	3,522,055			6,283,023	6,148,936
Channels and Canals	116,747,169	28,191,804		144,938,973	36,435,591			181,374,564	180,400,571
Locks	115,040,739	5,506,412		120,547,151	78,944,734			199,491,885	198,548,988
Bridges	25,531,887	170,167	7,047,624	32,749,678	8,340,872			41,090,550	40,923,400
Gatelifters	2,485,882			2,485,882	772,220			3,258,102	3,244,331
Movable equipment — including shore, floating, shop and other equipment	1,455,742	375,682		1,831,424	583,545			2,414,969	2,379,720
Works under construction	887,498	1,288,609		2,176,107				2,176,107	2,105,419
Non-toll canals and other properties at Lachine, Cornwall, Sault Ste. Marie and Niagara Peninsula							49,846,782	49,846,782	49,766,478
	272,425,204	36,725,547	8,554,432	317,705,183	130,522,051			498,074,016	494,211,152
Remedial Works — expenditures on property owned by others	45,754,544	7,039		45,761,583				45,761,583	34,009,077
	318,179,748	36,732,586	8,554,432	363,466,766	130,522,051			543,835,599	528,220,229

THE ST. LAWRENCE SEAWAY AUTHORITY

NON-TOLL CANALS

*Statement of Expense, Income and Capital Expenditures
for the year ended December 31, 1963*(with comparative figures for the year ended
December 31, 1962)

	<u>1963</u>	<u>1962</u>
Expense		
Operation and maintenance:		
Salaries and wages	\$1,238,369	\$1,266,104
Employee benefits	128,175	125,413
Major maintenance materials and services	696,893	280,249
Other materials and services	210,285	113,719
Loss on disposal of obsolescent materials	114,120	1,335
Grants in lieu of municipal taxes	637,559	699,893
Special grants to municipalities	473,000	—
	<u>3,498,401</u>	<u>2,486,713</u>
Administration and engineering expense (portion applicable to non-toll canals)	461,986	373,981
Total expense	<u>3,960,387</u>	<u>2,860,694</u>
Income		
Rentals	331,526	304,537
Wharfage	41,082	68,674
Miscellaneous	186,466	227,282
Total income	<u>559,074</u>	<u>600,493</u>
Operating deficit	3,401,313	2,260,201
Capital expenditures		
Construction of works	113,486	59,252
Acquisition of equipment	50,090	16,214
	<u>163,576</u>	<u>75,466</u>
Net expenditures	<u>3,564,889</u>	<u>2,335,667</u>
Recovered from:		
Department of Transport 1962-63 appropriations, Votes 230 and 230A	1,486,857	
Department of Transport 1963-64 appropriations, Vote 230	1,520,808	
	<u>3,007,665</u>	
Balance to be recovered from Department of Transport	557,224	
	<u>3,564,889</u>	

ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

CANAUX NON SOUMIS AU PÉAGE

Etat des dépenses, des recettes et des immobilisations pour l'année terminée le 31 décembre 1963

(avec chiffres comparatifs pour l'année terminée le 31 décembre 1962)

	1963	1962
Dépenses		
Exploitation et entretien	\$1,238,369	\$1,266,104
Traitements et salaires	128,175	125,413
Prestations aux employés	696,893	280,249
Travaux d'entretien importants, matériaux et services	210,285	113,719
Autres matériaux et services	114,120	1,335
Perte relative à la disposition de matériaux désuets	637,559	699,893
Subventions tenant lieu d'impôts municipaux	473,000	—
Subventions spéciales à des municipalités	3,498,401	2,486,713
Administration et services techniques (partie applicable aux canaux non soumis au péage)	461,986	373,981
Dépenses totales	3,960,387	2,860,694
Recettes		
Loyers	331,526	304,537
Droits d'accostage et de terre-plein	41,082	68,674
Divers	186,466	227,282
Recettes totales	559,074	600,493
Déficit d'exploitation	3,401,313	2,260,201
Dépenses en immobilisations	113,486	59,252
Construction d'ouvrages	50,090	16,214
Acquisition de matériel	163,576	75,466
Dépenses nettes	\$3,564,889	\$2,335,667
Récupéré sur:		
Crédits du ministère des Transports pour 1962-1963—nos 230 et 230A	\$1,486,857	
Crédits du ministère des Transports pour 1963-1964—no 230	1,520,808	
3,007,665		
Solde à récupérer du ministère des Transports	557,224	
	\$3,564,889	

ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

Immobilisations au 31 décembre 1963 (avec chiffres comparatifs au 31 décembre 1962)

	Acquis par l'Administration				Confées à l'Administration			Totaux	
	Section du fleuve Saint-Laurent	Canal maritime de Welland	Pont du chenal nord	Total	Canal maritime de Welland	Canaux non soumis au péage		1963	1962
Terrain	\$ 8,539,059	\$ 1,174,137	\$ 501,804	\$ 10,215,000	\$ 1,923,034	\$	\$ 12,138,034	\$ 10,693,309	
Bâtiments	1,737,228	18,736	1,005,004	2,760,968	3,522,055		6,283,023	6,148,936	
Chenaux et canaux	116,747,169	28,191,804		144,938,973	36,435,591		181,374,564	180,400,571	
Écluses	115,040,739	5,506,412		120,547,151	78,944,734		199,491,885	198,548,988	
Ponts	25,531,887	170,167	7,047,624	32,749,678	8,340,872		41,090,550	40,923,400	
Lève-portes.	2,485,882	—		2,485,882	772,220		3,258,102	3,244,331	
Matériel mobile — y compris le matériel riverain flottant, d'atelier et autre	1,455,742	375,682		1,831,424	583,545		2,414,969	2,379,720	
Ouvrages en construction.	887,498	1,288,609		2,176,107			2,176,107	2,105,419	
Canaux non soumis au péage et autres biens à Lachine, Cornwall, Sault-Sainte-Marie et dans la péninsule du Niagara	272,425,204	36,725,547	8,554,432	317,705,183	130,522,051	49,846,782	49,846,782	49,766,478	
Ouvrages de protection, dépenses sur des biens appartenant à d'autres	45,754,544	7,039		45,761,583			45,761,583	34,009,077	
	\$318,179,748	\$36,732,586	\$8,554,432	\$363,466,766	\$130,522,051	\$49,846,782	\$543,835,599	\$528,220,229	

ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

État des dépenses pour l'année terminée le 31 décembre 1963

(avec chiffres comparatifs pour l'année terminée
le 31 décembre 1962)

1963	1962
Exploitation et entretien	
Traitements et salaires	\$3,524,746
Prestations aux employés	365,132
Travaux d'entretien importants, matériaux et services	546,170
Exploitation de ponts par des compagnies de chemin de fer	148,875
Service de sécurité	—
Autres matériaux et services	680,725
Subventions tenant lieu d'impôts municipaux	360,374
Administration du bureau central	5,626,022
Traitements des membres et du personnel de direction	111,260
Autres traitements et salaires	779,453
Prestations aux employés	75,042
Frais de bureau	45,042
Frais de voyage et de déménagement	33,221
Communications	31,391
Subventions tenant lieu d'impôts municipaux	28,751
Location de machines de bureau	28,276
Locaux de bureaux	22,395
Réserve pour créances douteuses	6,895
Divers	45,397
Administration régionale	1,207,123
Traitements et salaires	559,249
Prestations aux employés	57,463
Frais de bureau	27,299
Voyages	13,501
Divers	42,454
Services techniques	699,966
Traitements et salaires	427,336
Prestations aux employés	41,924
Frais de bureau	25,870
Voyages	19,175
Divers	62,454
Dépenses totales	8,715,061
	8,186,725

ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

Etat des recettes et des dépenses pour l'année terminée le 31 décembre 1963

(avec chiffres comparatifs pour l'année terminée le 31 décembre 1962)

	1963	1962
Recettes		
Péages	\$10,730,418	\$ 9,555,641
Loyers	453,947	429,548
Droits d'accostage et de terre-plein	136,268	177,668
Pont international de Cornwall - Rooseveltown - recettes nettes	193,351	121,107
Intérêts	172,387	46,412
Divers	358,853	385,325
	<u>12,045,224</u>	<u>10,715,701</u>
Dépenses (Annexe A)		
Exploitation et entretien	6,231,213	5,626,022
Administration du bureau central	1,207,123	1,290,257
Administration régionale	699,966	712,873
Services techniques	576,759	557,573
	<u>8,715,061</u>	<u>8,186,725</u>
A déduire: Partie des frais d'administration et de services techniques afférente		
aux canaux non soumis au péage	461,986	373,981
Frais des services techniques imputés sur d'autres comptes	282,750	442,392
	<u>744,736</u>	<u>816,373</u>
	<u>7,970,325</u>	<u>7,370,352</u>
Revenu net d'exploitation avant provision pour intérêts et renouvellement des machines et du matériel	4,074,899	3,345,349
Intérêts sur prêts de l'Etat (à l'exclusion de la somme de \$70,381 ajoutée aux frais de construction)	16,803,405	15,396,959
Intérêts sur réclamations des entrepreneurs et autres postes	632	163,848
Réserve pour renouvellement des machines et du matériel	961,254	888,554
	<u>17,765,291</u>	<u>16,449,361</u>
Perte nette de l'année	\$13,690,392	\$13,104,012

ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

Remarques concernant le bilan

1. Les sommes restant à verser relativement aux contrats dont les travaux n'étaient pas terminés au 31 décembre 1963 s'élevaient à environ \$700,000.
2. Deux demandes de paiements supplémentaires, formant un total de \$385,000, reçues d'entrepreneurs relativement à l'exécution de contrats, n'avaient pas encore fait l'objet d'un règlement le 31 décembre 1963. L'offre de \$36,000 en règlement d'une réclamation au montant de \$188,000, faite par l'Administration, avec l'approbation du Conseil du Trésor, à l'un des entrepreneurs a été rejetée par ce dernier qui a intenté une poursuite contre l'Administration et réclame \$254,000 et les intérêts.
3. L'Administration estime à \$1,500,000 la somme à verser pour l'indemnisation des biens en voie d'expropriation au 31 décembre 1963.
4. Conformément aux dispositions du décret C.P. 1963-1912 du 27 décembre 1963, le montant principal des emprunts obtenus en vertu de l'article 25 de la Loi sur l'Administration de la voie maritime du Saint-Laurent pour le financement de la construction de la voie maritime, plus les intérêts précédemment différés et tous les autres intérêts courus ou à échoir au 31 décembre 1964, devra être remboursé, avec les intérêts courants, en quarante-cinq versements annuels égaux, à compter du 31 décembre 1965.
5. La réserve pour le renouvellement des machines et du matériel, qui était de \$4,254,283 au 31 décembre 1963, représente la réserve accumulée pour le renouvellement des biens qui, de l'avis de l'Administration, devront être remplacés. Rien n'a été prévu dans les comptes pour le remplacement des bâtiments, des portes d'écluses, des écluses et des ponts. L'Administration estime que ces ouvrages de la voie maritime peuvent être tenus en état de fonctionnement en tout temps dans le cadre de son programme d'entretien.

PASSIF

1963	1962
Exigibilités:	
Comptes créditeurs et passif cumulé	\$ 1,723,631
Somme due à la Saint Lawrence Development Corporation pour péages	35,835
Retenues des entrepreneurs	158,167
Total des exigibilités	1,938,412
Dépôts de garantie des entrepreneurs et garanties de péages (contre-partie)	398,740
Réserve pour renouvellement des machines et du matériel	4,254,283
Part de propriétaire du gouvernement du Canada:	
Immobilitisations confées à l'Administration par le gouverneur en conseil en vertu de l'art. 14 de la Loi	180,563,672
Emprunts en vertu de l'art. 25 de la Loi	341,500,000
Emprunts temporaires en vertu de l'art. 26 de la Loi	8,000,000
Intérêts sur emprunts-paiement différé	66,261,051
A déduire: déficit	596,324,723
Solde au début de l'année	37,934,394
Ajouter: perte de l'année, selon l'état des recettes et des dépenses	13,690,392
Solde à la fin de l'année	51,624,786
Part nette	544,699,937
	526,436,982
	37,934,394
	\$551,291,372
	\$532,149,396

J'ai examiné le bilan ci-dessus ainsi que l'état des recettes et des dépenses s'y rapportant, et j'ai présenté un rapport le 25 mars 1964 au ministre des Transports.

A. M. HENDERSON
L'Auditeur général du Canada,

ACTIF

Disponibilités:		
Encaisse	\$ 345,697	\$ 211,343
Bons du Trésor du Canada et dépôts bancaires à court terme.	5,173,225	1,898,611
Comptes débiteurs (moins réserve pour créances douteuses)	356,613	622,324
Dette du Gouvernement du Canada-canaux non soumis au péage (état I)	557,224	70,192
Inventaires des matériaux, du matériel secondaire et des travaux d'atelier en cours-au prix coûtant (moins réserve pour matériel désuet)	599,274	675,718
Total des disponibilités	7,032,033	3,478,188
Cautiounnements et espèces détenus à titre de dépôts de garantie des entrepreneurs et de garanties de péages (contre-partie)	398,740	450,979
Prêts et investissement dans la Seaway International Bridge Corporation Ltd.	25,000	—
Immobilisations: (Annexe B)		
Acquisies par l'Administration, au prix coûtant		
Section du fleuve Saint-Laurent	318,179,748	305,361,958
Canal maritime de Welland (améliorations)	36,732,586	34,099,806
Pont de Cornwall-chenal nord	8,554,432	8,443,350
Confées à l'Administration, aux valeurs de cession	363,466,766	347,905,114
Canal maritime de Welland (moins aliénations)	130,522,051	130,548,637
Canaux non soumis au péage et autres biens	49,846,782	49,766,478
Total des immobilisations	543,835,599	528,220,229
	\$551,291,372	\$532,149,396

Les remarques annexées font partie intégrante du présent état.

Certifié exact:

J. M. MARTIN
Le Directeur des finances et de la comptabilité,

Approuvé:

R. J. RANKIN
Le Président,

Les frais d'exploitation et d'entretien des canaux et des ouvrages relevant de l'Administration sont définis, en vertu de l'alinéa c) de l'article 16, comme comprenant tous les frais d'exploitation de l'Administration ainsi que les réserves qui peuvent être approuvées par le Ministre. L'Administration est d'avis qu'il n'est pas nécessaire d'inclure la dépréciation dans les frais d'exploitation et d'entretien et que l'amortissement au cours d'une période de cinquante ans du principal des emprunts ainsi que des intérêts, comme l'exigent les alinéas a) et b), satisfait aux exigences de la Loi. Les frais afférents à l'année à l'étude ne comprennent donc aucune réserve pour la dépréciation. Une somme de \$961,254 a été prévue, au cours de l'année à l'étude, pour le remplacement des machines et du matériel, notamment de ceux des écluses, ponts et bâtiments. Cette hausse a porté la réserve pour le renouvellement des machines et du matériel à \$4,254,283 au 31 décembre 1963.

Aucune somme n'a été affectée dans les comptes à l'égard du remplacement des bâtiments, des ports d'écluse, des écluses et des ponts. L'Administration estime que ces ouvrages de la voie maritime peuvent être tenus constamment en bon état dans le cadre de son programme d'entretien.

En conformité des prescriptions de l'article 87 de la Loi sur l'Administration financière et sous réserve des observations qui précèdent, je déclare qu'à mon avis

a) l'Administration a tenu des livres de comptabilité appropriés;

b) les états financiers de l'Administration

(i) ont été préparés sur une base comparable à celle de l'année précédente et concordent avec les livres de comptabilité;

(ii) dans le cas du bilan, donnent un exposé juste et fidèle de l'état des affaires de l'Administration à la fin de l'année financière; et

(iii) dans le cas de l'état des recettes et des dépenses, donnent un exposé juste et fidèle des recettes et des dépenses de l'Administration pour l'année financière; et

c) les opérations de l'Administration venues à ma connaissance étaient de la compétence de l'Administration aux termes de la Loi sur l'Administration financière et de toute autre loi applicable à l'Administration.

L'Auditeur général,
A. M. HENDERSON

L'HONORABLE J. W. PICKERSGILL
MINISTRE DES TRANSPORTS
OTTAWA

J'ai examiné les comptes et les états financiers suivants de l'Administration de la voie maritime du Saint-Laurent pour l'année terminée le 31 décembre 1963:

Bilan	
Etat des recettes et des dépenses pour l'année terminée le 31 décembre 1963	Annexe A
Immobilisations au 31 décembre 1963	Annexe B
Canaux non soumis au péage	
Etats des dépenses, des recettes et des dépenses en immobilisations	
pour l'année terminée le 31 décembre 1963	Etat I

En vertu de l'article 25 de la Loi sur l'Administration de la voie maritime du Saint-Laurent, le ministre des Finances, avec l'approbation du gouverneur en conseil, peut de temps à autre consentir des prêts à l'Administration. L'article 13 de la Loi, dans sa forme modifiée, stipule que l'ensemble des montants ainsi empruntés en vertu de la Loi et non encore remboursés ne doit jamais dépasser 535 millions de dollars.

Le bilan ci-joint indique qu'au 31 décembre 1963, l'Administration devait au gouvernement du Canada, à l'égard des emprunts et des intérêts différés, une somme de \$415,761,051 se répartissant ainsi:

Emprunts contractés en vertu de l'article 25 de la Loi	\$341,500,000
Emprunts temporaires en vertu de l'article 26 de la Loi	8,000,000
Intérêts au 31 décembre 1959—différés	19,427,117
Intérêts pour l'année 1961—différés	14,288,940
Intérêts pour l'année 1962—différés	15,671,951
Intérêts pour l'année 1963—différés	16,873,043
	<u>\$415,761,051</u>

En vertu de l'article 16 de la Loi sur l'Administration de la voie maritime du Saint-Laurent, les péages sont destinés à assurer un revenu suffisant pour couvrir les frais d'exploitation de l'Administration, lesquels comprennent des versements à l'égard des intérêts sur les montants empruntés par l'Administration et des versements suffisants pour amortir le principal des montants empruntés pendant une période d'au plus cinquante ans. Aux termes de ces dispositions, les conditions initiales selon lesquelles des prêts étaient consentis à l'Administration en vertu de l'article 25 de la Loi, n'exigeaient le paiement des intérêts que pendant les trois premières années entières d'exploitation (soit jusqu'au 31 décembre 1962); par la suite, il devait être payé des montants annuels suffisants pour amortir en quarante-sept ans (c'est-à-dire au cours d'une période se terminant le 31 décembre 2009) tous les emprunts et intérêts y afférents. Les termes des arrangements financiers de l'Administration ont été modifiés au cours de 1961 et de nouveau en 1963. Ils prévoient maintenant le remboursement de tous les emprunts, plus les intérêts précédemment différés et tous les autres intérêts courus ou à échoir au 31 décembre 1964, ainsi que les intérêts courants, en quarante-cinq versements annuels égaux, à compter du 31 décembre 1965.

Conformément à ces arrangements financiers, les intérêts sur les opérations de l'année s'élèvent à \$16,803,405 (un montant supplémentaire de \$70,381 est compris dans les frais de construction), mais ces intérêts n'ont pas été payés et ont été portés au bilan sous Part de propriétaire du gouvernement du Canada. Rien n'a été porté aux opérations de l'année à l'égard de l'amortissement du principal des sommes empruntées.

et des intérêts y afférents. Les intérêts sur les investissements de l'Administration dans le pont s'élevaient à \$428,000 et, par conséquent, l'investissement récupérable comportait une augmentation de \$235,000.

Canaux non soumis au péage

En plus d'exploiter la voie maritime qui comprend les canaux en eau profonde des sections du fleuve Saint-Laurent et de Welland, l'Administration exploite des canaux non soumis au péage et d'autres biens à Lachine, à Cornwall, à Sault-Sainte-Marie et dans la péninsule de Niagara pour le compte du gouvernement du Canada.

Les dépenses nettes afférentes à ces biens et à ces canaux sont remboursées au moyen de crédits votés par le Parlement. En 1963, les dépenses se sont élevées à \$4,139,000 (1962—\$4,946,000) dont \$164,000 (1962—\$75,000) étaient des dépenses en immobilisations. Face à ces dépenses, les recettes de 1963 se sont élevées à \$574,000 (1962—\$610,000). L'augmentation des dépenses provient en grande partie de travaux d'entretien importants effectués aux ponts du canal de Lachine et de subventions spéciales accordées au canton de Wainfleet (\$53,000) et au comté d'Haldimand (\$420,000) relativement aux propriétés de l'ancien troisième canal de Welland qui ne sont plus requises aux fins de la navigation et dont ils ont assumé la responsabilité.

SECTION FINANCIERE

POINTS SAILLANTS

(En millions de dollars)

Année	Cargaisons tonnes	Péages	Divers	Frais	Montant prévu pour le remplacement	Profit net d'exploitation	Intérêts	Perte de l'année	Déficit accumulé	Dettes en (1) fin d'année
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Section du fleuve Saint-Laurent

*1959	20.6	\$7.1	\$0.3	\$1.4	\$0.3	\$5.7	\$7.4	\$1.7	\$1.7	\$281.3
1960	20.3	7.2	0.1	2.1	0.4	4.8	11.5	6.7	8.4	297.3
1961	23.4	8.1	0.1	2.3	0.5	5.4	12.7	7.3	15.7	314.6
1962	25.6	8.9	0.2	2.9	0.5	5.7	13.6	7.9	23.6	328.6
1963	30.9	10.7	0.3	3.1	0.5	7.4	14.3	6.9	30.5	347.8

*Frais d'exploitation et intérêts pour neuf mois

Section du canal de Welland

1959	27.5	\$1.2	\$0.6	\$2.4	\$0.2	\$0.8	\$0.7	\$1.5	\$1.5	\$ 26.6
1960	29.2	1.3	0.7	3.8	0.3	2.1	1.2	3.3	4.8	33.9
1961	31.5	1.5	0.7	4.5	0.4	2.7	1.5	4.2	9.0	40.5
1962	35.4	0.6	0.8	4.4	0.4	3.4	1.8	5.2	14.2	45.9
1963	41.2	—	0.8	4.9	0.4	4.5	2.1	6.6	20.8	59.1

*Les péages dans le canal de Welland ont été suspendus le 18 juillet 1962

Pont de Cornwall — chenal nord

1959	—	—	—	—	—	\$—	\$—	\$—	\$—	\$ 2.1
1960	—	—	—	—	—	—	—	—	—	3.3
1961	—	—	—	—	—	—	—	—	—	6.6
*1962	—	—	—	—	—	0.1	0.2	0.1	0.1	8.5
1963	—	—	—	—	—	—	0.4	0.2	0.3	8.9

*Le pont a été ouvert à la circulation le 3 juillet 1962
(1) La dette égale les emprunts plus les intérêts différés.

Au 31 décembre 1963, des frais au montant de \$2,216,000, dont \$1,398,000 en 1963, avaient été engagés pour le jumelage des écluses du canal de Welland.

Dépenses en immobilisations

l'objet d'études.

Aux termes du décret C.P. 1963-1912 du 27 décembre 1963, le principal des emprunts contractés en vertu de l'article 25 de la Loi ainsi que les intérêts courus ou à courir jusqu'à décembre 1964 doivent être remboursés, avec les intérêts courants, en quarante-cinq versements annuels égaux effectués de 1965 à 2009 inclusivement. Toutefois, la question des obligations financières de l'Administration et de leur réorganisation possible font

coût des immobilisations. Les intérêts courus pendant la construction ajoutés au solde de \$14,636,000 est compris dans les intérêts ci-dessus, \$349,500,000 représentent des emprunts. Les intérêts différés s'élèvent à un total de \$66,261,000, dont \$51,625,000 représentent les déficits accumulés et le solde de \$14,636,000 est compris dans les intérêts courus pendant la construction ajoutés au

(En milliers de dollars)									
Section du canal de Welland									
Saint-Laurent									
Section du canal de Welland									
Point de Cornwall									
canal nord									
Brutes	Réserves	Nettes	actif	actif	actif	actif	actif	actif	actif
\$318,205	\$2,529	\$315,676	\$1,671	\$30,479	\$347,829	36,733	1,669	35,034	3,224
\$363,492	\$4,254	\$359,238	\$4,898	\$51,625	\$451,761	8,554	26	8,528	344
8,554	26	8,528	—	344	8,872	36,733	1,669	35,034	3,224
8,554	26	8,528	—	344	8,872	36,733	1,669	35,034	3,224
8,554	26	8,528	—	344	8,872	36,733	1,669	35,034	3,224

qu'il suit:

1963 les dettes de l'Administration (emprunts et intérêts différés) s'élevaient à \$415,761,000, répartis ainsi

Comme l'indique l'état ci-dessus, au 31 décembre

à ces fins.

le Parlement aura mis en disponibilité les fonds prévus

terme seront remboursés au moyen des emprunts à long

écluses du canal de Welland. Ces emprunts à court

de financer les dépenses préliminaires du jumelage des

paiement mentionné ci-dessus avant le 31 décembre et

vertu de l'article 26 afin de permettre d'effectuer le

pruntées temporairement du ministre des Finances en

Après modification de la Loi, 8 millions ont été em-

frais de construction pour 1963.

Victoria. Ce montant a été payé et est compris dans les

ferées et au réaménagement des approches du pont

du Canada relativement aux frais de déviation de voies

572 et 1963-1140, aux chemins de fer Nationaux

ment de \$11,752,504, en vertu des décrets C.P. 1963-

pour permettre à l'Administration d'effectuer un paie-

de Welland et un montant supplémentaire de 10 millions

Pont de Cornwall — chenal nord

présent rapport.

dont il a été question dans une partie antérieure du

dessus provient entièrement de l'augmentation du trafic

des péages, l'augmentation des recettes indiquée ci-

Vu qu'il n'y a eu aucun changement dans le tarif

dienne (\$8,914,000 en monnaie canadienne en 1962).

comme se sont établis à \$10,730,000 en monnaie cana-

Les péages que l'Administration a imposés pour son

Etats-Unis en 1962).

en monnaie des Etats-Unis (\$3,667,000 en monnaie des

Developpement Corporation se sont établis à \$4,403,000

l'année 1963, les péages imposés pour le compte de la

Corporation et dont l'autre partie lui revient. Durant

une partie va à la Saint Lawrence Seaway Development

l'Administration impose et perçoit des péages dont

Section du Saint-Laurent

poration Limited.

de \$25,000 dans la Seaway International Bridge Cor-

dans la section du canal de Welland et un investissement

du Saint-Laurent, \$1,232,000 pour des améliorations

travaux de construction et d'amélioration dans la section

relativement au pont Victoria, \$1,245,000 pour des

\$11,753,000 aux chemins de fer Nationaux du Canada

Welland en 1963 (voir ci-dessus), le paiement de

prennent les frais de jumelage des écluses du canal de

courus pendant la construction). Ces dépenses com-

sont élevées à \$15,653,000 (dont \$70,000 d'intérêts

En 1963, les dépenses totales en immobilisations se

Le 1^{er} janvier 1963, la Seaway International Bridge Corporation Limited se chargeait de l'exploitation du pont à péage. Pour l'année 1963, en conformité d'une entente intervenue entre les deux organismes de la voie maritime, l'Administration a reçu de la corporation du pont la somme de \$193,000 à titre de participation à l'amortissement du coût du nouveau pont (chenal nord)

1962.

rimaire est restée en vigueur jusqu'au 31 décembre

l'Administration de la voie maritime. L'entente inté-

exploité provisoirement par la Division des ponts de

serait chargée de l'exploitation du pont, celui-ci a été

juin 1962, d'une nouvelle filiale de l'Administration qui

organismes de la voie maritime étaient convenus en

tion et en attendant la constitution, dont les deux

nouveau pont (chenal nord) construit par l'Administra-

Bridge Company Limited. Après l'inauguration du

veloppement Corporation par la Cornwall International

l'Administration et de la Saint Lawrence Seaway De-

well-Rooseveltown était exploité pour le compte de

Avant le 3 juillet 1962, le pont international Corn-

SERVICES D'INFORMATION

recherches approfondies et parfois préparer des articles sur des sujets particuliers.

Les milieux de l'enseignement reconnaissent de plus en plus l'importance de la voie maritime dans la vie du pays, et les services d'information répondent sans retard aux demandes de renseignements provenant d'étudiants, d'instituteurs et de professeurs d'université, tant du Canada que de l'étranger.

Le personnel de l'Administration voit à la publication du *Manuel de la Voie Maritime*, du *Traffic Report of the St. Lawrence Seaway*, et du présent rapport. Les deux premiers documents sont publiés en collaboration avec l'organisme américain qui régit l'exploitation de la voie maritime, la *Saint Lawrence Seaway Development Corporation*.

CONTENTIEUX

Un programme complet de revision du système de location a été entrepris il y a deux ans.

En conséquence, les recettes provenant des loyers en 1962 ont atteint \$734,085; elles ont augmenté de \$51,388 en 1963 pour atteindre un total de \$785,473. Les résultats de ce programme de revision devraient continuer de se faire sentir sous forme d'augmentation des recettes provenant des loyers durant les deux prochaines années.

SECTION FINANCIÈRE

(En milliers de dollars)			
Cumulativement du 1er août 1954 au 31 décembre 1963	Année 1963		
\$341,500	\$ 7,000	Emprunts et autres dettes	Sources des fonds
8,000	8,000	Emprunts temporaires en vertu de la Loi	26 de la Loi
66,261	16,873	Intérêts différés	
415,761	31,873	Produits de la vente d'immobilisations	
878	41	Réserve pour remplacement d'im-	
4,566	961	mobilités	
242	2	Divers	
\$421,447	\$32,877		
\$347,113	\$15,583	Immobilisations — additions brutes	Utilisation des fonds
17,615	70	Coût de construction ou d'acquisition	
364,728	15,653	Intérêts durant la construction	
51,625	13,690	Perte nette	
5,094	3,534	Acrit net (1963 — augmentation)	
\$421,447	\$32,877		

Les services d'information de l'Administration jouent un rôle très varié. Ils publient des communiqués et des annonces à l'intention des usagers, des journaux, des ministères de l'Etat et des organismes publics. Ils répondent aussi aux demandes de renseignements qui leur viennent des secteurs public et privé, tant au Canada qu'à l'étranger.

Les services collaborent et travaillent de concert avec divers ministères et organismes à l'occasion de visites particulières et de fonctions officielles intéressant la voie maritime.

Les services d'information ont répondu en 1963 à plus de 5,000 demandes de renseignements. Dans la plupart des cas, ils font parvenir de la documentation aux correspondants mais ils doivent souvent faire des

Relativement à la poursuite de ses fins et à l'exécution de ses opérations, l'Administration dispose, dans les provinces d'Ontario et de Québec, de terrains de canal qui représentent une superficie globale importante.

Certains terrains ainsi que des privilèges sur d'autres terrains, dont l'Administration n'a pas besoin présentement pour ses opérations, sont cédés à bail ou en vertu de permis contre des loyers appropriés.

En annexe au présent rapport figurent le bilan de l'Administration établi au 31 décembre 1963 et l'état des recettes et des dépenses pour l'année se terminant à cette même date, conformément au rapport de l'Auditeur général.

Est donné en regard un état des sources et de l'utilisation des fonds pour l'année 1963 et pour la période allant du début de la construction de la voie maritime jusqu'au 31 décembre 1963.

Emprunts

La modification apportée en 1963 à la Loi sur l'Administration de la voie maritime du Saint-Laurent a porté de 345 millions à 535 millions de dollars la limite des emprunts que peut effectuer l'Administration. Cette modification avait pour objet d'assurer la disponibilité de 180 millions pour le jumelage des écluses du canal

Étude relative à une chaussée à Cardinal (Ont.)

On a poursuivi les études relatives à l'amélioration possible des installations d'accès à la ville de Cardinal, à la suite de l'abandon du canal de 14 pieds.

Emplacement de l'exposition universelle de 1967

L'aménagement de cet emplacement, envisagé par la ville de Montréal, comprend l'agrandissement de l'île Sainte-Hélène et de l'île Ronde dans le port de Montréal

ADMINISTRATION

PERSONNEL

et la construction d'une nouvelle île près de la digue de la voie maritime en aval du pont Victoria. L'Administration apporte son aide à la ville de Montréal et à la Compagnie de l'Exposition universelle en leur fournissant tous les renseignements relatifs au sous-sol ainsi que les relevées des niveaux d'eau. L'Administration a le plus grand intérêt à s'assurer qu'aucun ouvrage relatif à l'exposition ne nuise aux installations ni au trafic de la voie maritime. L'Administration de la voie maritime est représentée au sein du comité interministériel fédéral qui s'occupe d'approuver les projets relatifs à l'emplacement qui pourraient influencer sur le niveau des eaux.

Deux conventions de travail de la Canadian Brotherhood of Railway, Transport and General Workers, intéressant environ 1,100 travailleurs, ont expiré le 31 décembre 1963. Les pourparlers en vue de nouvelles conventions seront entrepris au début de 1964. Des fonctionnaires de l'Administration ont suivi les cours de formation et de perfectionnement du personnel organisés par la Commission du service civil et par

PÉAGES ET STATISTIQUES

différents ministères fédéraux et portant sur les méthodes de gestion, la tenue des archives, la simplification du travail, la préparation et le contrôle des formules. Le 31 décembre 1963, le personnel comptait 1,374 membres, soit 46 de plus qu'en décembre 1962. L'administration tient à exprimer sa satisfaction à tous ses fonctionnaires et employés pour la loyauté et la compétence dont ils ont fait preuve.

La répartition des péages prévue dans le Tarif des péages de la voie maritime apparaît sur les factures, et les représentants ou les propriétaires sont tenus d'établir les chèques en monnaie canadienne et en monnaie des Etats-Unis suivant les indications. Aucune révision importante relative à l'imposition des péages n'a été faite durant l'année et toutes les formules exigées des représentants ont été remplies et reçues dans le délai fixé par l'Administration. Les cargaisons en transit, suivant la définition contenue dans le Règlement

ment, ont été déclarées non assujéties au péage en 1962, dans le cas des cargaisons remontantes. En 1963, cette exemption a été appliquée aux cargaisons en transit tant des communautés et des statistiques sur le trafic sont publiées régulièrement tous les mois au cours de la saison de navigation et un rapport complet sur le trafic est préparé chaque année à l'intention du public. Voir au début du présent rapport la note relative au *Traffic Report of the St. Lawrence Seaway*.

ACHATS ET MAGASINS

Un drapeau a été adopté. Bleu et blanc, il porte l'emblème de l'Administration et il est arboré sur les immeubles et navires appartenant à l'Administration.

On a poursuivi durant toute l'année l'application du programme de disposition des biens excédentaires. Les achats effectués au cours de l'année représentaient un montant d'environ deux millions de dollars.

Aménagement paysagiste

La mise en oeuvre de ce programme s'est poursuivie en 1963 près des écluses et au pont international de la voie maritime.

On a planté environ 1,700 arbres et arbustes à l'écluse de Saint-Lambert. Les pentes gazonnées à Côte Sainte-Catherine comprennent maintenant la bande de terrain située entre la route et le chenal régulateur de dérivation. On a poursuivi les travaux de nivellement et de gazonnement et entrepris la construction du remblai de l'ap-proche du pont du chenal sud sur l'île Cornwall.

Canal de Welland

Amélioration du chenal et aménagement des pentes entre les écluses 3 et 4

Un contrat comportant l'excavation de 500,000 verges cubes d'argile et de pierre avait été adjugé en octobre 1962. Les travaux ont été achevés au printemps de 1963.

Amélioration du chenal et aménagement des pentes au nord du pont 15

Un contrat visant l'agrandissement de la cuvette du canal et l'amélioration de l'alignement au nord du pont 15 a été adjugé en février 1963. Les travaux ont été achevés au début de l'été.

Amélioration des installations de vidange des écluses jumelées 4

Il n'existait pas d'installation satisfaisante permettant la vidange de l'une des écluses séparément en cas d'urgence. Pour remédier à cette situation, on a entrepris la modification de l'entrée des écluses. Les travaux comprennent l'enlèvement des vieilles portes en bois et leur remplacement par des poutrelles retenues dans des rainures et manœuvrées par un treuil, ainsi que l'installation de pompes à grand débit pour la vidange rapide de l'une ou l'autre écluse. Les travaux, commencés à la fin de 1962, se sont terminés à la fin de 1963.

Améliorations des installations d'amarrage aux écluses 4 et 5

On éprouvait des difficultés à placer les amarres des navires de grande longueur à l'extrémité amont des écluses 4 et 5 du canal de Welland. Comme le nombre de ces navires augmente chaque année, on a pris des mesures pour obvier à ces difficultés avant l'ouverture de la saison de navigation de 1963. On a percé des galeries dans les bajoyers et installé des bollards supplémentaires afin de donner un meilleur angle aux amarres avant ou arrière des navires remontants ou descendant.

Retenue en avant de l'écluse 7 et récupération de Marlatt's Pond

Au cours de l'année, on a continué à agrandir l'aire d'accumulation d'eau en amont de l'écluse 7. Les parties remblayées du marécage connu sous le nom de Marlatt's Pond ont été gazonnées.

Remise en état de certaines vannes d'écluse

On a effectué, au canal de Welland, l'amélioration de certaines vannes d'écluse qui présentaient des problèmes de fonctionnement.

Examen des ponts du canal de Welland

On a effectué un examen minutieux de la plupart des vingt ponts mobiles qui enjambent le canal de Welland, tous en service depuis plus de 30 ans. Il a été décidé de réparer et de remettre en état deux ponts levants verticaux au cours de la morte-saison de 1963-1964.

Remise en état du pont enjambant la rivière Welland à Chippawa

Les travaux de remise en état du vieux pont à bascule qui enjambe la rivière Welland à Chippawa et sa transformation en travée fixe, commencés au cours de l'hiver de 1961-1962 dans le cadre du programme de travaux d'hiver, se sont poursuivis pendant l'hiver suivant et ont été achevés au printemps de 1963.

Essais et recherches hydrologiques visant à l'amélioration du fonctionnement des écluses

On a poursuivi en 1963 le programme d'essais et de recherches qu'on avait établi en 1960 afin d'étudier les méthodes propres à améliorer le fonctionnement des écluses. Le système de commande semi-automatique par boutons-poussoirs des opérations d'éclusement a été installé aux écluses 1, 2 et 3 du canal de Welland. Ce système assure le fonctionnement consécutif des vannes de manière à produire le plus haut degré d'efficacité possible, ce qui réduit le temps de remplissage des écluses à moins de 12 minutes.

On a commencé des essais à l'écluse de Côte Sainte-Catherine afin d'étudier le comportement des portes à sectionnaires lorsqu'on fait varier le débit et qu'on les ferme pour arrêter l'écoulement de l'eau. Ces essais ont pour but de déterminer les améliorations à apporter aux portes de garde à section en vue de l'installation de telles portes à l'entrée amont des écluses du canal de Welland. On a poursuivi les études hydrologiques relatives aux nouveaux barrages et écluses que l'on projette d'aménager dans le canal de Welland ainsi qu'aux modifications que l'on doit apporter aux écluses actuelles afin de les adapter aux conditions nouvelles.

qu'on les fait fonctionner, des systèmes d'injection d'air ont été construits, installés et placés, afin de réduire la formation de glace sur les portes busquées et à éloigner la glace flottante de ces lieux.

S.T.S. Hercules

Le S.L.S. Hercules de l'Administration, grue flottante, pivotante et automotrice d'une capacité de 275 tonnes a été mis en service au début de l'année et a été employé à plusieurs reprises au levage de fardeaux lourds dans le port de Montréal.

TRAVAUX DE GÉNIE

Tunnel de Beauharnois

Afin d'éliminer l'aveuglement temporaire qu'éprouvent les automobilistes qui entrent dans le tunnel de Beauharnois à grande vitesse par temps ensoleillé, on a appliqué de la peinture blanche sur les murs du tunnel au delà des entrées et de la peinture noire en deçà des entrées. On a également installé au-dessus de la route, près des approches, de grands écriteaux limitant la vitesse à 35 milles à l'heure.

Remise en état des ponts du canal de Lachine

Le programme de réparations et de modifications importantes qui s'imposait par suite de l'usure et de la corrosion des ponts qui enjambent le canal de Lachine se poursuit. On a terminé au cours de l'année les travaux importants de réparation et de réfection du pont Black (n° 1), commencés en 1962, et on a adjugé un contrat pour la réparation et la remise en état du pont de la rue des Seigneurs (n° 3); les travaux étaient presque complètement terminés à la fin de l'année.

Réparation des dommages à un pont

Ponts levants jumaux du Pacifique-Canadien à Caughnawaga

Aux petites heures du matin du 22 août 1963, le pont a été endommagé par des explosifs, placés par amont à l'endroit où le pont a été réparé. Heureusement, la circulation maritime et ferroviaire n'a été retardée que pendant le court temps qu'il a fallu pour examiner les dommages et s'assurer de la sécurité et du bon fonctionnement de l'autre pont. Le constructeur du pont a effectué les réparations d'urgence et le pont a été remis en service le mois suivant.

Installations d'amarrage, Caughnawaga

En juillet 1963, un contrat a été adjugé pour des installations d'amarrage dans le canal à l'approche amont des ponts levants jumaux du chemin de fer Pacifique-Canadien à Caughnawaga, afin de parer aux difficultés de manœuvre des navires par grands vents lorsqu'il se produit des retards dans l'ouverture des ponts. Les travaux prévus dans le contrat ont été parachevés en novembre, mais la construction des parties flottantes de la structure a été entreprise par le personnel de l'Administration à titre de travaux d'hiver. On s'attend que le tout sera terminé au début de l'été de 1964.

Défenses en bois sur les bajoyers d'entrée

Le programme d'installation de défenses en bois et en caoutchouc butylique sur les bajoyers d'entrée s'est terminé en 1963 par la mise en place de défenses à l'écluse d'Iroquois ainsi qu'au bajoyer nord-ouest de l'écluse 8 du canal de Welland.

Modifications et améliorations

Portes d'écluse

A la suite d'études faites sur le fonctionnement des portes d'écluse dans la section du fleuve Saint-Laurent, on a adjugé deux contrats pour l'amélioration des gâlets des portes à secteur et des machines servant à actionner les portes.

Poules des contrepois des ponts levants verticaux

On a terminé l'étude des modifications à apporter aux poules des contrepois des ponts de Saint-Louis et de Valleyfield. Pendant l'hiver de 1962-1963, on a enlevé les poules, effectué les modifications et remis les poules en place.

Dans le cas d'un navire descendant qui a pénétré dans une écluse et qui est déjà amaré au bajoyer, le préposé à l'écluse n'a qu'à pousser un bouton qui commande les vannes servant à vider l'écluse, de sorte que le navire est abaissé jusqu'au niveau suivant. Au moment opportun, les portes aval s'ouvrent automatiquement, les défenses qui protègent les portes se lèvent et le navire peut passer. La durée du fonctionnement automatique peut être calculée pour assurer un écoulement rapide et facile, réduisant au minimum la possibilité d'erreurs humaines. Dans des circonstances exceptionnellement difficiles, comme par exemple en cas d'accident ou de présence de glace, il peut être nécessaire d'avoir encore recours à la commande manuelle par un préposé spécialisé et les mesures nécessaires ont été prises en vue d'une telle éventualité.

Accidents et Retards

La navigation a surtout été retardée à cause de conditions atmosphériques défavorables, comme les grands vents et le brouillard. Le mauvais temps a causé la perte de 614 heures en 1963 contre 827 en 1962.

Les défaillances du matériel des écluses, des ponts et des autres ouvrages ont été la cause de retards représentant un total de 153 heures, dont 92 dans le canal de Welland. En 1962, le total des heures de retard avait été de 49, dont 17 dans le canal de Welland.

Le tableau suivant indique le genre des accidents dans lesquels des navires ont été impliqués :

<i>Genre d'accident</i>		<i>Nombre de navires</i>	
Collision (8 accidents)	17		
Navires abordant des ponts	15		
Navires percutant les câbles de garde aux écluses	4		
Navires percutant les bajoyers et les murs d'approche	38		
Navires percutant les murs de chute	0		
Échouages (navires à l'extérieur des limites du chenal)	19		
TOTAL	93		

Dans la section du Saint-Laurent, 32 navires impliqués dans des accidents ont causé environ 4 heures de retard, alors que dans le canal de Welland, 61 navires ont été impliqués dans des accidents causant 53 heures de retard.

Une analyse de ces statistiques indique que dans le canal de Welland 3 navires d'eaux intérieures par 1,000 passages ont été impliqués dans des accidents, ce qui est à peu près la même proportion que l'année précédente. Toutefois, le nombre des océaniques impliquées dans des accidents a augmenté à 20 par 1,000 en 1963, comparativement à 13 en 1962. Il est à signaler toutefois

Améliorations

que les accidents survenus aux océaniques ont été moins graves que ceux qu'ont subis les navires d'eaux intérieures.

Suivent quelques exemples des nombreuses améliorations qui ont été faites en vue d'aider à la navigation :

- Des feux au sodium ont été installés pour indiquer l'extrémité de tous les murs d'amarage. Ces feux sont d'un jaune brillant qui se détache bien sur les nombreux feux qui se trouvent près des écluses, de sorte qu'ils aident les navigateurs à localiser les murs de façon précise durant la nuit.
- Trente-quatre bites d'amarages ont été installées entre les ponts 12 et 13 dans le canal de Welland.
- La construction d'installations d'amarage d'urgence en amont du pont de Caughnawaga a été presque terminée.
- A plusieurs écluses, un nouveau système de sonorisation a été installé pour permettre au maître-écluser de parler aux officiers de navires de tout point de l'écluse, longue d'un mille, et pour l'aider à diriger le travail des équipes de l'écluse.
- Un grand nombre d'essais ont été effectués en vue de mettre au point un feu de régulation de la navigation plus perfectionné pour les ponts.
- De meilleures installations d'amarage ont été construites aux extrémités amont des écluses 4 et 5 dans le canal de Welland afin d'assurer une plus grande sécurité à l'amarage des gros navires.

Entretien

Une grande partie du programme d'entretien préventif a comporté une inspection très poussée de tous les ouvrages et de tout le matériel d'exploitation, en vue d'éviter des défaillances prématurées. Ont été l'objet de l'inspection tous les trains d'engrenages ouverts ou protégés, les vis sans fin, les câbles, les guides et les autres organes mobiles ou fixes du matériel électrique et mécanique servant à faire fonctionner les ponts, les vannes, les portes, les défenses, les ouvrages régulateurs et les stations de pompage.

Le matériel flottant comprenant les remorqueurs, les dragues de sondage, les lève-portes, les derrick et les bateaux de travaux ont été périodiquement inspectés et éprouvés suivant les normes mécaniques et de sécurité de l'inspection des navires à vapeur.

Pour assurer de longues saisons de navigation et protéger les portes d'écluses contre les dommages lors-

EXPLOITATION

Formation

Des cours d'instruction destinés au personnel d'exploitation ont été donnés aux bureaux de Cornwall et au canal de Welland. Le principal but de ces cours, qui se donnent durant les mois d'hiver, est d'améliorer et d'uniformiser les méthodes d'exploitation sur toute la voie maritime. Les résultats très encourageants qui ont été obtenus jusqu'ici en justifient la continuation.

Inspection des navires

Les membres du personnel de la voie maritime et les inspecteurs du ministère des Transports procèdent à de nombreuses inspections pour s'assurer que les navires ont le matériel requis et sont en bon état de navigabilité. Suit un sommaire des inspection faites pendant la saison de navigation de 1963:

Navigabilité	52
Premier transit de la voie maritime	178
Nouvelles inspections	161
Remorques	19
TOTAL	410

En outre, les plans de 250 navires ont été présentés à l'examen afin d'établir s'ils répondaient aux prescriptions de la voie maritime relatives au matériel d'amarrage, aux bras d'atterrissage et aux défenses.

Sécurité

Le 22 août, un pont levant vertical a été endommagé à Caughnawaga par des explosifs placés par des inconnus. Le pont était en position ouverte au moment de l'incident et la navigation n'a été interrompue que pour quelques jours. De concert avec la Gendarmerie royale du Canada, l'Administration a décidé d'installer un système de sécurité concernant à la fois la région est et la région ouest de la voie maritime. Plusieurs ouvrages ont été dotés d'éclairage de sécurité et on a augmenté l'étendue des aires entourées de clôtures de sécurité.

Automatisation

En 1963, un système de fonctionnement automatique par boutons-poussoirs a été installé à plusieurs écluses et ponts. Le fonctionnement des machines, qui était commandé manuellement, a fait place à une suite de mouvements automatiques qui, lorsque le premier a été commandé par l'opérateur, se poursuivent automatiquement, chacun commençant lorsque le précédent est terminé. La commande des écluses et des ponts peut se faire avec une grande précision au moyen de ce système.

La navigation en général

Pendant quelques mois après l'ouverture de la voie maritime, en 1959, et durant les années 1960, 1961 et 1962, le passage dans la section du Saint-Laurent de la voie maritime était permis aux navires ayant un tirant d'eau maximum de 25 pieds. D'importants travaux de balayage effectués durant ces quatre années ont démontré que les chenaux, qui, suivant les plans, devaient avoir une profondeur de 27 pieds, étaient stables et qu'il ne se produisait qu'un envasement minimum aux endroits critiques.

Au début de la saison de navigation, en 1963, après consultation avec les entreprises de navigation, le tirant d'eau maximum permis a été augmenté de 6 pouces et porté à 25 pieds et 6 pouces dans la section de la voie maritime allant de Montréal au lac Ontario. C'est le même tirant d'eau que celui qui s'applique au canal de Welland depuis l'ouverture de la voie en 1959. L'augmentation de 6 pouces signifie qu'un gros navire des lacs peut transporter environ 600 tonnes de cargaison de plus.

La présence de glace dans le lac Saint-Louis a retardé jusqu'au 13 avril la pose des bouées de sorte que la navigation a dû être limitée aux heures de jour dans certains secteurs jusqu'au 20 avril. Toutefois, la voie maritime a été ouverte à la date prévue de Montréal au lac Ontario, le premier navire ayant franchi l'écluse de Saint-Lambert le 15 avril.

L'état des glaces dans le lac Érie, devant l'entrée du port de Port Colborne, a empêché la navigation hâtive dans le canal de Welland, et bien que la navigation locale ait commencé le 1^{er} avril, ce n'est que le 7 avril que le premier navire a franchi le canal de Welland.

Le mouvement des navires n'a cessé d'être considérable pendant toute la saison. Les conditions météorologiques favorables à la fin de l'automne ont permis la navigation du lac Ontario à Montréal après la date officielle de fermeture, soit le 30 novembre. Le dernier navire a franchi l'écluse de Saint-Lambert le 13 décembre. Alors que la glace commençait à se former sur les ouvrages du canal de Welland, le dernier navire traversait ce canal le 18 décembre.

Le canal de Sault-Sainte-Marie a été ouvert le 4 avril suivant les prévisions mais il a été fermé le 30 novembre, environ deux semaines plus tôt que la normale, afin de permettre le remplacement, durant la morte-saison, de l'ancien seuil de bois, à l'extrémité aval de l'écluse, par un seuil de béton.

RAPPORT ANNUEL DE 1963

de la voie maritime du Saint-Laurent a atteint un sommet sans précédent durant la saison de navigation de 1963.

Le trafic remontant qui a emprunté les canaux a augmenté régulièrement par suite surtout de la demande accrue de minéral de fer provenant du bas Saint-Laurent. Les ventes de blé sans précédent du Canada aux marchés d'outre-mer ont constitué un apport important au trafic descendant, particulièrement à celui des grains. Parmi les denrées qui sont transportées dans le canal de Welland, le charbon est un produit important qui est expédié des ports des Etats-Unis vers l'extrémité amont du lac Ontario.

Près de 31 millions de tonnes de cargaisons ont traversé la section de Montréal au lac Ontario de la voie maritime, alors que le trafic ayant traversé la section du canal de Welland a atteint 41 millions de tonnes.

Section de Montréal au Lac Ontario

Les navires remontant et descendant cette section de la voie maritime y ont effectué 6,285 transits durant la saison de navigation de 1963 comparativement à 6,351 en 1962. La jauge brute au registre de tous les navires qui ont effectué ces transits dépasse 35 millions de tonnes.

Les cargaisons transportées par les navires remontants ont atteint 13,540,000 tonnes contre 17,403,000 tonnes transportées par les navires descendants, soit 30,943,000 tonnes au total, ce qui représente une augmentation du trafic total de 20.9 p. 100 par rapport à 1962 et de 52 p. 100 par rapport à 1959, première année de l'exploitation de la voie maritime du Saint-Laurent.

Les navires d'eaux intérieures ont effectué près de deux fois plus de transits que les océaniques et ils ont transporté une proportion du trafic total presque trois fois plus grande.

Voici le rapport annuel publié par l'Administration de la voie maritime du Saint-Laurent pour l'année 1963, dans lequel elle rend compte de sa cinquième année d'exploitation de la voie navigable en eau profonde entre Montréal et le lac Erie.

Le rapport porte également sur l'exploitation et l'administration des autres canaux cédés à l'Administration par le ministère des Transports le 1^{er} avril 1959. Durant la saison de navigation de 1963, plusieurs nouveaux sommets ont été atteints relativement au trafic. Les cargaisons ayant traversé la section de Montréal au lac Ontario ont dépassé de beaucoup 30 millions de tonnes et les cargaisons transportées dans la section du canal de Welland de la voie maritime, entre le lac Ontario et le lac Erie, ont dépassé 41 millions de tonnes. La jauge brute au registre des navires ayant transité a été plus élevée que celle de n'importe quelle saison précédente.

Le total des péages provenant de ce trafic a dépassé, en 1963, 15 millions de dollars que se sont partagés le Canada et les Etats-Unis.

A l'ouverture de la saison de navigation de 1963, le tirant autorisé dans les chenaux entre Montréal et le lac Ontario a été augmenté de 6 pouces et porté à 25 pieds et six pouces, ce qui est le tirant d'eau autorisé dans le canal de Welland depuis plusieurs années.

En août 1963, on a annoncé que le gouvernement avait décidé d'effectuer le jumelage de toutes les écluses du canal de Welland.

L'Administration de la voie maritime du Saint-Laurent remercie de leur collaboration la Saint Lawrence Seaway Development Corporation des Etats-Unis, les ministères fédéraux et provinciaux et les différentes entreprises hydroélectriques du Canada et des Etats-Unis.

Trafic

Le trafic-marchandises dans la section de Montréal au lac Ontario et dans la section du canal de Welland

Direction		1961		1962		1963	
Remontant	%	7,015,145	- 8.7	9,374,400	+33.6	11,689,442	+24.7
		14,328,392	+38.1	13,701,592	- 4.4	16,312,653	+19.1
Descendant	%	21,343,537	+18.2	23,075,992	+ 8.1	28,002,095	+21.3
		Total					
Augmentation ou diminution		Augmentation		Augmentation		Augmentation	
Tonnes de cargaisons en vrac							

ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

R. J. RANKIN, président

PIERRE CAMU, vice-président

PETER E. R. MALCOLM, membre

PERSONNEL DE DIRECTION

R. J. BURNSIDE Directeur de l'exploitation
L. H. BURPEE Ingénieur en chef
JOHN T. CARVELL Avocat-conseil
J. M. MARTIN Directeur des finances et de la comptabilité
T. J. QUIGG Directeur de l'administration
L.-E. BÉLAND Secrétaire

ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

Le 31 mars 1964.

L'honorable J. W. Pickersgill

Ministère des Transports

Ottawa (Ont.)

Monsieur,

Je vous présente ci-joint le rapport de l'Administration de la voie maritime du Saint-Laurent pour la période allant du 1^{er} janvier 1963 au 31 décembre 1963, en conformité du paragraphe (3) de l'article 85 de la Loi sur l'administration financière, chapitre 116, S.R.C. 1952.

Respectueusement,

Le Président,

R. J. RANKIN.

On peut se procurer un rapport détaillé sur le trafic de la voie maritime en 1963 chez l'Imprimeur de la Reine, n° de catalogue TS 2-2/1963, au prix de 75c. l'exemplaire.

Le Manuel de la voie maritime, qui renferme les circulaires et le règlement relatifs au transit dans la voie maritime, est en vente chez l'Imprimeur de la Reine, n° de catalogue TS 2-164F, au prix de \$5 l'exemplaire.

Le présent rapport annuel est en vente chez l'Imprimeur de la Reine à Ottawa, et dans les librairies du Gouvernement fédéral à Ottawa, Montréal et Toronto. Les intéressés peuvent aussi le consulter dans toutes les bibliothèques publiques du Canada.

N° de catalogue: TS 1-1963

Prix: 35c.

RAPPORT
ANNUEL
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ADMINISTRATION DE LA VOIE
MARITIME DU SAINT-LAURENT



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THE ST. LAWRENCE SEAWAY AUTHORITY

ANNUAL REPORT

1964



Available from the *Queen's Printer*, Ottawa and at Canadian Government book shops at Ottawa, Montreal and Toronto. A deposit copy is also available for reference in public libraries across Canada.

The *Seaway Handbook*, containing circulars and regulations for transit of the Seaway \$5.00 per copy, catalogue No. TS2-164.

The *Annual Report of The St. Lawrence Seaway Authority*, \$0.35 per copy, catalogue No. TS1-1964.

A detailed *Traffic Report of the Seaway for 1964* \$0.75 per copy, catalogue No. TS2-264.

THE ST. LAWRENCE SEAWAY AUTHORITY

Government
Publications

EXECUTIVE OFFICERS

<i>President</i>	R. J. RANKIN
<i>Vice-President</i>	PIERRE CAMU
<i>Member</i>	PETER E. R. MALCOLM
<i>Director of Operations</i>	R. J. BURNSIDE
<i>Director of Special Projects</i>	L. H. BURPEE
<i>Counsel</i>	JOHN T. CARVELL
<i>Chief Engineer</i>	W. R. MACKAY
<i>Director of Finance and Accounting</i>	J. M. MARTIN
<i>Director of Administration</i>	T. J. QUIGG
<i>Secretary</i>	L. E. BELAND
<i>Director, Eastern Region</i>	R. L'HEUREUX
<i>Director, Western Region</i>	A. M. LUCE
<i>Project Director, Welland</i>	W. A. O'NEIL

LOCATIONS

Head Office:	396 Cooper Street, Ottawa 4.
Cornwall	Corner of Pitt & Second Sts.
Headquarters:	or P.O. Box 98, Cornwall, Ont.
Eastern Region:	P.O. Box 97, St. Lambert, P.Q.
Western Region:	P.O. Box 370, St. Catharines, Ont.
Engineering Headquarters:	5250 Ferrier St., Montreal 9, P.Q.
Welland Modernization & Twinning Project:	P.O. Box 592, St. Catharines, Ont.

YEAR IN REVIEW

MONTREAL — LAKE ONTARIO SECTION	<u>1964</u>	<u>1963</u>	<u>% change</u>
Total number of transits	6,779	6,285	+ 7.9
Total cargo tonnage	39,309,029	30,942,890	+27.0
Average cargo tonnage per transit	5,799	4,923	+17.8
Total gross registered tonnage	40,588,147	35,030,711	+15.9
Average gross registered tonnage per transit	5,987	5,574	+ 7.4
Total toll revenue in \$*	19,085,247	15,122,282	+26.2
Average toll revenue per transit in \$	2,815	2,406	+17.0

WELLAND SECTION**

Total number of transits	8,304	7,597	+ 9.3
Total cargo tonnage	51,388,512	41,303,479	+24.4
Average cargo tonnage per transit	6,188	5,437	+13.8
Total gross registered tonnage	54,866,566	48,047,664	+14.2
Average gross registered tonnage per transit	6,607	6,324	+ 4.5

COMBINED TRAFFIC***

Total number of transits	10,036	9,521	+ 5.4
Total cargo tonnage	55,779,142	45,570,207	+22.4
Total gross registered tonnage	60,679,029	54,372,812	+11.6

*Includes both Canadian & U.S. revenues.

**Tolls suspended on Welland Section, July 18, 1962.

***Where traffic involves transit of both Montreal - Lake Ontario and Welland sections the duplication has been eliminated.

FINANCIAL REVIEW

Government
Publications

	<u>1964</u>	<u>1963</u>	<u>Change</u>
MONTREAL — LAKE ONTARIO SECTION			
Income	\$14,108,612	\$11,265,749	+\$2,842,863
Operating expenses and replacement provision	3,743,678	3,669,928	+ 73,750
Net operating income	10,364,934	7,595,821	+ 2,769,113
Deduct interest on loans	15,444,825	14,712,243	+ 732,582
Net loss for the year	<u>\$ 5,079,891</u>	<u>\$ 7,116,422</u>	<u>—\$2,036,531</u>

WELLAND SECTION

Income (from rents, wharfage etc.)	\$ 941,495	\$ 779,474	+\$ 162,021
Operating expenses and replacement provision	6,724,044	5,261,650	+ 1,462,394
Net operating loss	5,782,549	4,482,176	+ 1,300,373
Add interest on loans	2,619,402	2,091,794	+ 527,608
Net loss for the year	<u>\$ 8,401,951</u>	<u>\$ 6,573,970</u>	<u>+\$1,827,981</u>

COMBINED RESULTS

Income	\$15,050,107	\$12,045,223	+\$3,004,884
Operating expenses and replacement provision	10,467,722	8,931,578	+ 1,536,144
Net operating income	4,582,385	3,113,645	+ 1,468,740
Deduct interest on loans	18,064,227	16,804,037	+ 1,260,190
Net loss for the year	<u>\$13,481,842</u>	<u>\$13,690,392</u>	<u>—\$ 208,550</u>

ANNUAL REPORT 1964

March 31, 1965.

THE HONOURABLE J. W. PICKERSGILL,
Minister of Transport,
Ottawa.

Sir:

Herewith is the annual report of The St. Lawrence Seaway Authority for the period January 1 to December 31, 1964.

Respectfully submitted,
R. J. RANKIN,
President.

The year 1964, the sixth year of operation of the St. Lawrence Seaway and the longest navigation season to date, was marked by new records in traffic and in revenues.

These records, plus the programme of modernization of the Welland Canal which started in 1964 and leads to the major expansion of the Canal's facilities, were the highlights of the year.

Despite these record levels in traffic and revenue, the Authority finds itself, at the close of another year, deeper in debt which increased by \$17.7 million during the year. Of this increase only \$5 million represented borrowings, the balance being unpaid interest.

The financial statements of the Authority as at December 31, 1964, and the Auditor General's report thereon will be found on pages 10 to 19 of this Report.

The net loss for 1964 was \$13.5 million compared with \$13.7 million for 1963. Two principal factors account for the size of these losses. The first is the interest burden — a burden somewhat exaggerated by the necessity of financing substantially the 1959 to 1964 operating cost of the Welland Section out of interest-bearing indebtedness. The second is the Welland operating cost itself.

For the six years since the commencement of navigation on the Seaway, the total interest cost charged against operations has amounted to \$85.5 million. During this period the Welland Section, a vital part of the system which continues to be toll-free, has accumulated an operating loss aggregating \$19.3 million. On the other hand, although revenues and traffic have been lower than originally forecast, for each of the six years the Montreal-Lake Ontario Section has produced operating profits which aggregate \$39.6 million at the end of 1964. These profits, however, fall substantially short of the Authority's annual financial obligations which accordingly have continued to increase. These factors have so far made it impossible for the Seaway as a whole to be self-supporting, as was originally planned.

A proposal for the alleviation of the burden of the operating and interest cost of the Welland Section by parliamentary appropriation has been made, but a successful long-term solution to the Seaway's problem as a whole is essential to its present and future financial health.

The tariff of tolls was established by international agreement between Canada and the United States in 1959 following a study and joint report of tolls committees. This agreement provided that a further review of the tariff of tolls to determine their sufficiency to meet the statutory requirements should be made and reported upon to the respective governments by the entities prior to July 1, 1964.

During 1964, a further agreement was reached to extend the developmental period of the Seaway by two years with no change in tolls.

The joint review is being continued and at the conclusion of this two-year extension, as provided by the international agreement, the intent is that the tolls proposals should be related as realistically as possible to the financial requirements of the Seaway entities. By Order in Council P.C. 1964-2036 of December 23, 1964 the deferment of interest was extended for a further two-year period, ending in 1966.

In 1964 the interest cost was \$18.1 million (1963 — \$16.8 million). The Montreal-Lake Ontario Section earned \$10.4 million (1963 — \$7.6 million) before interest, while the Welland Section lost \$5.8 million (1963 — \$4.6 million), leaving a net operating profit of \$4.6 million (1963 — \$3.1 million). For the first time, the income and expenditures of the two sections of the Seaway are detailed separately in the financial statements.

As will be noted from the Statement of Operating Interest which appears on page 9 of this Report, \$9.3 million out of the 1964 operating profit of the Montreal-Lake Ontario Section has been applied against interest related to that section which therefore met 60% of its \$15.4 million interest charge for the year. Since 1959 the Authority has been able to apply earnings of the Montreal-Lake Ontario Section, aggregating \$39.4 million, against total 1959-64 operating interest charges of \$75.5 million for the section. The amount applied is 52% of the total operating interest charges for the section. In consequence of the deferment of interest it was possible to use a large portion (\$32.9 million) of this amount to finance the Welland Section and it is included in debt attributed to that section.

For the Montreal-Lake Ontario Section the joint Canadian-United States toll revenue was \$19.1 million, an increase of nearly \$4 million or more than 26% over 1963. For 1964 the Authority's share of this revenue was

\$13.5 million (1963 — \$10.7 million). This revenue increase relates directly to the tonnage carried by the section which increased by 27% to 39.3 million tons from 30.9 million tons in 1963.

The toll-free Welland Section carried 51.4 million tons of cargo in 1964, an increase of 25% over 1963.

There was a steady flow of iron ore to Lake Erie ports from the North Shore of the Gulf of St. Lawrence, and heavy shipment of wheat early in the season to overseas markets.

The increased traffic of 1964 — 707 more transits than in 1963 — produced acute congestion in the Welland Section with its 8 locks, its 19 bridges and a lift of 326 feet in less than 27 miles.

To relieve this congestion the Authority secured the services of a firm of traffic management consultants to determine the cause of these delays and the means to reduce them quickly.

It has been established that the delays were due to the following factors:

- (a) A sudden large increase in traffic in 1964 over 1963 of about 25% in tons and about 10% in transits. Transits by lakerees were characterized by an increase in the number of large vessels and greater tonnages. Ocean traffic which has particularly serious navigational problems in the canal increased in cargo tonnage by about 33% and in the number of transits by 25%.
- (b) Interruptions due to weather, accident, and lack of pilots frequently contributed to long waiting lines at the canal entrances.
- (c) Arrival of vessels in groups also added to waiting lines.

The programme to increase the canal capacity by twinning the single locks would not produce major results for several years. Clearly the urgency of the problem demanded paralleling this programme with more immediate measures to increase capacity.

The immediate programme in which the consultants and Authority officers are collaborating is proceeding satisfactorily, and substantial improvements are confidently expected during the 1965 and 1966 navigation seasons. Capital expenditures of \$3.8 million on this programme were made in 1964.

Despite record low water conditions in the Great Lakes and the St. Lawrence River, the regular maximum permissible draft of 25½ feet was maintained for the main Seaway channels throughout the 1964 navigation season.

The Montreal-Lake Ontario Section was open from April 8 to December 7, a total of 243 days, the longest navigation season since the section opened in 1959. The

Welland Section was open from March 30 to December 15.

Very cold weather towards the end of November and early in December made navigation difficult on the Montreal-Lake Ontario Section, especially in the area of Cote Ste. Catherine and St. Lambert. The water in this area does not feel the warming effect of the Lake Ontario flow and it has been found that ice forms more rapidly than farther upstream. Navigation was warned of the severe weather conditions and of the fact that the situation probably would deteriorate rapidly insofar as ice was concerned. One hundred and nine vessels cleared St. Lambert Lock downbound after November 30, through waters which were at the freezing point. To avoid wintering in the Great Lakes, several of these vessels hurried to clear the system without waiting to complete cargo commitments. The last of these cleared on December 7. Four ocean vessels did not leave the lake ports in sufficient time before the freeze-up to transit from Iroquois to Montreal and had to winter in the Great Lakes.

A decision to close a portion of the old Lachine Canal was taken to become effective February 1, 1965. It was prompted by the necessity for the Canadian Corporation for the World Exhibition and the City of Montreal to build a causeway across the canal and extend University Street. This will become the major access road from Montreal Island to the Fair. The portion of the Lachine Canal to be closed is at the easterly end from Wellington Street tunnel to the upper limits of Montreal Harbour below Lock 1. This portion has carried very little traffic in recent years.

New labour agreements covering Authority employees were negotiated during 1964 with the Canadian Brotherhood of Railway, Transport and General Workers.

As of December 31, 1964, there were 1,421 employees. Of these, 112 were engaged on improvements to the Welland Section. There was a reduction of 65 in employees engaged in operating and maintaining the Seaway during the year.

An intensive safety programme was undertaken throughout the Authority and is being vigorously applied.

Plans were developed to provide all operating employees with a distinctive uniform in 1965.

Security measures were extended by the installation of additional lighting and fencing of vulnerable areas in accordance with recommendations of the Royal Canadian Mounted Police.

Construction was started on a new headquarters building for the Western Region at St. Catharines, Ontario. Plans were completed for a new Eastern Region headquarters building at St. Lambert, Quebec.

SUMMARIZED TRAFFIC DATA FOR THE YEAR 1964

	Montreal — Lake Ontario Section	Welland Section
No. of transits	6,779	8,304
Gross reg. tonnage	40,588,147	54,866,566
Cargo tonnage —		
Bulk	35,632,442	48,299,234
General	3,676,587	3,089,278
Total	39,309,029	51,388,512
Main Commodities		
Wheat.	9,189,877	9,807,835
Corn	3,216,214	3,430,853
Barley.	1,218,718	1,467,547
Coal	801,859	6,292,642
Iron ore	12,157,448	16,830,620
Fuel oil	1,507,849	922,081
Newsprint	349,062	474,758

TRAFFIC ON THE NON-TOLL CANALS IN 1964

	Lachine Canal	Cornwall Canal	Sault Ste-Marie Canal
No. of transits	1,046	154	3,011
Gross registered tonnage . .	947,098	129,936	3,780,235
Cargo tonnage	576,310	72,893	933,326

FINANCIAL HIGHLIGHTS

(in millions)

SEAWAY

Year	Cargo Tons	Revenue	Expenses	Net Optg. Profit	Interest	Loss for Year	Debt (1) at Year-End
(1) Debt equals borrowings plus deferred interest							
Montreal — Lake Ontario Section							
*1959	20.6	\$ 7.4	\$1.8	\$ 5.6	\$ 7.4	\$1.8—	\$283.4
1960	20.3	7.3	2.5	4.8	11.5	6.7—	300.6
1961	23.4	8.2	2.8	5.4	12.7	7.3—	321.2
1962	25.6	9.2	3.4	5.8	13.8	8.0—	337.1
1963	30.9	11.2	3.6	7.6	14.7	7.1—	356.7
1964	39.3	14.2	3.8	10.4	15.5	5.1—	362.8

*Operating expenses and interest are for nine months.

Welland Section

1959	27.5	\$1.8	\$2.6	\$0.8—	\$0.7	\$1.5—	\$ 26.6
1960	29.2	2.0	4.1	2.1—	1.2	3.3—	33.9
1961	31.5	2.2	4.9	2.7—	1.5	4.2—	40.5
*1962	35.4	1.4	4.8	3.4—	1.8	5.2—	45.9
1963	41.2	0.8	5.3	4.5—	2.1	6.6—	59.1
1964	51.4	0.9	6.7	5.8—	2.6	8.4—	70.7

*Welland tolls were suspended on July 18th, 1962.

NON-TOLL CANALS (excludes prior Welland Canals)

Year	Cargo Tons	Expenses	Revenue	Net Optg. Deficit	Capital Expend.	Land	Total Expend.
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Lachine Canal

1959	1.2	\$0.5	\$0.3	\$0.2	\$0.4	\$ —	\$0.6
1960	1.2	0.8	0.3	0.5	0.1	—	0.6
1961	1.1	0.8	0.3	0.5	—	—	0.5
1962	.9	1.4	0.3	1.1	0.1	—	1.2
1963	.7	2.0	0.3	1.7	0.1	—	1.8
1964	.6	1.1	0.4	0.7	—	—	0.7

Cornwall Canal

1959	.2	\$0.2	\$ —	\$0.2	\$0.1	\$ —	\$0.3
1960	.2	0.5	0.1	0.4	0.1	—	0.5
1961	.2	0.5	0.1	0.4	—	—	0.4
1962	.2	0.6	0.1	0.5	—	—	0.5
1963	.2	0.8	0.2	0.6	—	—	0.6
1964	.1	0.8	0.2	0.6	—	0.3	0.9

Sault Ste-Marie Canal

1959	1.2	\$0.2	\$ —	\$0.2	\$ —	\$ —	\$0.2
1960	1.7	0.4	—	0.4	—	—	0.4
1961	1.1	0.5	—	0.5	—	—	0.5
1962	1.1	0.5	—	0.5	—	—	0.5
1963	.8	0.6	—	0.6	—	—	0.6
1964	.9	0.6	—	0.6	—	—	0.6

STATEMENT OF RECEIPTS AND EXPENDITURES OF FUNDS

Montreal — Lake Ontario Section

Change in 1964	1 Aug. '54 to 31 Dec. '64
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Welland Section

Change in 1964	1 Apr. '59 to 31 Dec. '64
-------------------	---------------------------------

Total
to
31 Dec. '64

Net Receipts of Funds			
From Government of Canada			
Loans	\$ —	\$326,700,000	\$5,000,000
Deferment of cash interest payments	—	—	3,985,784
			8,985,784
From Operations			
Profit before interest.	10,364,933	39,635,768	—
Replacement provision	457,030	2,844,614	407,836
Miscellaneous	243,303	1,049,698	24,439
			432,275
	11,065,266	43,530,080	2,420,848
Total Net Receipts	11,065,266	370,230,080	9,418,059
Funds Expended For			
Capital Assets — gross additions			
Operating interest	632,402	328,030,700	3,847,842
Loss before interest	9,313,830	39,405,870	—
	—	—	5,782,549
			9,630,391
Total Net Expenditures	9,946,232	367,436,570	59,960,998
Funds Retained (working capital)	\$ 1,119,034	\$ 2,793,510	\$ (212,332)
			\$ 6,000,323

STATEMENT OF OPERATING INTEREST

Interest charged to operations (1959-64)	\$15,444,825	\$ 75,538,258	\$2,619,402	\$ 9,917,882	\$ 85,456,140
Add: Deferment of cash interest payments	—	—	3,985,784	32,946,963	32,946,963
	15,444,825	75,538,258	6,605,186	42,864,845	118,403,103
Deduct: Interest deferred and outstanding — 31st Dec. 1964	6,130,995	36,132,388	6,605,186	42,864,845	78,997,233
Reduction of interest liability	\$ 9,313,830	\$ 39,405,870	\$ —	\$ —	\$ 39,405,870

THE HONOURABLE J. W. PICKERSGILL,
MINISTER OF TRANSPORT,
OTTAWA.

Sir,

I have examined the accounts and the following financial statements of The St. Lawrence Seaway Authority for the year ended December 31, 1964:

Balance Sheet	
Statement of Income and Expense for the year ended December 31, 1964	
Statement of Deficit for the year ended December 31, 1964	
Statement of Headquarters Administration and Engineering Expense for the year ended December 31, 1964	Schedule A
Capital Assets as at December 31, 1964	Schedule B
Non-toll Canals	
Statement of Expense, Income and Capital Expenditures for the year ended December 31, 1964	Exhibit I

Section 25 of the St. Lawrence Seaway Authority Act provides that the Minister of Finance, with the approval of the Governor in Council, may from time to time make loans to the Authority. Section 13 of the Act, as amended, states that the aggregate of the amounts so borrowed under the Act and outstanding shall not at any time exceed \$535,000,000.

The accompanying balance sheet shows that the Authority was indebted to the Government of Canada on December 31, 1964 in respect of loans and deferred interest in the total amount of \$433,497,233, made up as follows:

Loans under section 25 of the Act	
Interest-bearing	\$348,500,000
Interest-free	6,000,000
Interest to December 31, 1959—deferred	19,427,117
Interest for the year 1961—deferred	9,000,000
Interest for the year 1962—deferred	15,671,952
Interest for the year 1963—deferred	16,873,043
Interest for the year 1964—deferred	18,025,121
	<u>\$433,497,233</u>

Under the provision of section 16 of the St. Lawrence Seaway Authority Act, tolls are to be "designed to provide a revenue sufficient to defray the cost to the Authority of its operations", which costs are defined as including payments in respect of the interest on amounts borrowed by the Authority and amounts sufficient to amortize the principal of amounts so borrowed over a period not exceeding fifty years. The original conditions under which loans were made to the Authority under section 25 of the Act required the payment only of interest in the first three full years of operation (through the year ending December 31, 1962) and thereafter payment of annual amounts sufficient to amortize over a period of forty-seven years (or by December 31, 2009) all loans and interest thereon. The terms of the Authority's financing arrangements were amended in 1961, in 1963, and again in 1964 and now call for repayment of all interest-bearing loans together with interest previously deferred and all other interest

accrued or accruing up to December 31, 1966, together with current interest thereon, in forty-three equal annual instalments commencing December 31, 1967.

In accordance with these financial arrangements the year's operations have been charged with interest amounting to \$17,996,788 on long term loans (an additional amount of \$28,333 was included in construction costs), but this interest has not been paid and is included in the balance sheet as part of the Proprietary Equity of the Government of Canada. There was no charge to the year's operations with respect to amortization of the principal of the amounts borrowed. Interest charges of \$67,439 on temporary loans were paid during the year and deferred interest for the year 1961 was reduced by payment of \$5,288,940.

The costs of operating and maintaining the canals and works under the administration of the Authority are defined under paragraph (c) of section 16 as including all operating costs of the Authority and such reserves as may be approved by the Minister. The Authority is of the opinion that it is not necessary to include depreciation as an element of operating and maintenance cost and that the amortization over the fifty-year period of the principal of the amounts borrowed together with interest as required by subsections (a) and (b) meets the requirements of the Act. Accordingly, no provision for depreciation has been included in the costs of the year under review.

Provision has been made during the year under review toward the cost of replacing machinery and equipment, including lock, bridge and building machinery and equipment, in the amount of \$864,866. The Reserve for Replacement of Machinery and Equipment as thus augmented amounted to \$4,821,830 at December 31, 1964.

No provision has been made in the accounts for the replacement of buildings, lock gates and lock and bridge structures. The Authority considers that these Seaway works can be maintained in working condition at all times under its maintenance programme.

In compliance with the requirements of section 87 of the Financial Administration Act, I report that, in my opinion, subject to the above observations:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statements of the Authority
 - (i) were prepared on a basis consistent with that of the preceding year, and are in agreement with the books of account,
 - (ii) in the case of the balance sheet, give a true and fair view of the state of the Authority's affairs as at the end of the financial year, and
 - (iii) in the case of the statement of income and expense, give a true and fair view of the income and expense of the Authority for the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

A. M. HENDERSON,
Auditor General of Canada.

ASSETS

	1964	1963
Current Assets:		
Cash	\$ 92,844	\$ 345,697
Treasury bills of Canada and short-term bank deposits	6,741,577	5,173,225
Due from Government of Canada re non-toll canals (Exhibit I)	228,254	557,224
Accounts receivable (less provision for doubtful accounts)	584,289	356,613
Overpaid municipal grants	129,540	—
Inventories of materials, minor equipment and shop work in progress, at cost (less reserve for obsolescence)	549,463	599,274
Total Current Assets	8,325,967	7,032,033
 Bonds and Cash held as Contractors' Security		
Deposits and Toll Guarantees (contra)	619,881	398,740
 Investment in and Loan to The Seaway International Bridge Corporation, Ltd.	25,000	25,000
 Capital Assets, at cost or transfer value (Schedule B)	497,904,000	493,988,817
	<u>\$506,874,848</u>	<u>\$501,444,590</u>

The accompanying notes are an integral part of the financial statements.

Certified correct:

J. M. MARTIN

Director of Finance and Accounting

Approved:

R. J. RANKIN

President

SEAWAY AUTHORITY

(Seaway Authority Act)

March 31, 1964

(December 31, 1963)

LIABILITIES

	1964	1963
Current Liabilities:		
Accounts payable and accrued liabilities	\$ 2,148,670	\$ 1,723,631
Due to Saint Lawrence Seaway Development Corporation re tolls.	47,314	56,614
Contractors' holdbacks	129,658	158,167
Total Current Liabilities	2,325,642	1,938,412
Contractors' Security Deposits and Toll Guarantees (contra)	619,881	398,740
Reserve for Replacement of Machinery and Equipment	4,821,830	4,254,283
Proprietary Equity of the Government of Canada:		
Capital Assets entrusted to the Authority by the Governor in Council		
under section 14 of the Act	130,716,890	130,716,890
Loans under section 25 of the Act		
Interest-bearing	348,500,000	348,500,000
Interest-free	6,000,000	1,000,000
Interest on loans — payment deferred	78,997,233	66,261,051
	564,214,123	546,477,941
Deduct: Deficit — per Statement of Deficit	65,106,628	51,624,786
Net Equity	499,107,495	494,853,155
	<u>\$506,874,848</u>	<u>\$501,444,590</u>

I have examined the above Balance Sheet and the related Statement of Income and Expense and have reported thereon under date of March 30, 1965 to the Minister of Transport.

A. M. HENDERSON
Auditor General of Canada

NOTES TO FINANCIAL STATEMENTS

1. Outstanding commitments under uncompleted contracts as at December 31, 1964 amounted to approximately \$5,600,000.
2. A claim for additional compensation in respect of a completed contract, originally in the amount of \$188,000, remained unsettled at December 31, 1964. The Authority's offer of \$36,000 in settlement of this claim, made with the approval of Treasury Board in 1961, has been rejected by the contractor who has filed an action against the Authority claiming \$254,000 and interest.
3. The liability of the Authority with respect to compensation for properties under expropriation at December 31, 1964 is estimated by the Authority as amounting to \$1,000,000.
4. In accordance with the provisions of Order in Council P.C. 1964-2036 of December 23, 1964, the principal amount of interest-bearing loans received under section 25 of the St. Lawrence Seaway Authority Act to finance construction of the Seaway, together with interest previously deferred and all other interest now accrued or accruing up to December 31, 1966, is to be repaid, together with current interest thereon, in forty-three equal annual instalments commencing December 31, 1967.
5. Tolls on the Welland section of the Seaway have been suspended since July 1962. Supplementary Estimates presented to the House of Commons on March 19, 1965 provide for (a) the conversion as of January 1, 1965 of \$21,800,000 of the Authority's indebtedness pertaining to the Welland Canal to an interest-free loan and (b) the payment as of January 1, 1965 to the Authority of \$27,092,866 in respect of the accumulated Welland Canal deficit incurred by the Authority for the calendar years 1959-1964.
6. The Reserve for Replacement of Machinery and Equipment amounting to \$4,821,830 at December 31, 1964 represents the accumulated provision for replacement of assets which the Authority considers will require replacement. No provision has been made in the accounts for replacement of buildings, lock gates, and lock and bridge structures. The Authority considers that these Seaway works can be maintained in working condition at all times under its maintenance programme.

STATEMENT OF INCOME AND EXPENSE FOR THE YEAR ENDED DECEMBER 31, 1964

(with comparative figures for the year ended
December 31, 1963)

	Montreal — Lake Ontario Section		Welland Section		Totals	
	1964	1963	1964	1963	1964	1963
	\$	\$	\$	\$	\$	\$
Income						
Tolls assessed	\$13,544,436	\$10,730,418			\$13,544,436	\$10,730,418
Rentals	48,946	31,155	427,604	422,791	476,550	453,946
Wharfage	1,262	884	246,790	135,385	248,052	136,269
The Seaway International Bridge Corporation Ltd. — net income	198,689	193,351			198,689	193,351
Interest	144,575	150,373	25,248	22,014	169,823	172,387
S.L.S. "Hercules" — heavy-lift charges	52,250	15,480			52,250	15,480
Miscellaneous	118,454	144,088	241,853	199,284	360,307	343,372
	14,108,612	11,265,749	941,495	779,474	15,050,107	12,045,223
Expense						
Operation and maintenance						
Salaries and wages	1,493,103	1,264,659	2,779,844	2,572,983	4,272,947	3,837,642
Employee benefits	134,460	131,742	285,214	280,782	419,674	412,524
Major maintenance materials and services	348,074	148,308	1,215,590	564,021	1,563,664	712,329
Grants in lieu of municipal taxes	27,737	37,659	338,929	345,108	366,666	382,767
Traffic survey to relieve shipping congestion			256,073		256,073	
Bridge operating services by railway companies	70,587	64,360	78,890	93,355	149,477	157,715
Security guards	64,790	37,764			64,790	37,764
Inventory adjustments	61,220		41,479		102,699	
Other materials and services	402,534	468,787	296,648	221,685	699,182	
	2,602,505	2,153,279	5,292,667	4,077,934	7,895,172	6,231,213
Regional Administration						
Salaries and wages	297,148	317,252	255,366	241,997	552,514	559,249
Employee benefits	32,109	32,295	23,678	25,168	55,787	57,463
Office expenses	22,476	15,614	17,942	20,561	40,418	36,175
Travel and removal	16,792	7,366	14,640	6,135	31,432	13,501
Miscellaneous	33,742	24,896	27,316	8,682	61,038	33,578
	402,267	397,423	338,942	302,543	741,209	699,906
Less: Portion applicable to non-toll canals	160,505	171,196	30,870	29,347	191,375	200,543
	241,762	226,227	308,072	273,196	549,834	499,423
Headquarters administration ⁽¹⁾ (Schedule A)	387,577	665,125	637,759	345,237	1,025,336	1,010,362
Engineering expense (Schedule A)	54,804	74,090	77,710	155,236	132,514	229,326
	442,381	739,215	715,469	500,473	1,157,850	1,239,688
Total Expense	3,286,648	3,118,721	6,316,208	4,851,603	9,602,856	7,970,324
Net operating income (loss) before providing for interest and for replacement of machinery and equipment	10,821,964	8,147,028	(5,374,713)	(4,072,129)	5,447,251	4,074,899
Interest on loans from Government of Canada (not including \$28,333 added to construction costs)	15,444,825	14,712,243	2,619,402	2,091,794	18,064,227	16,804,037
Provision for replacement of machinery and equipment	457,030	551,207	407,836	410,047	864,866	961,254
	15,901,855	15,263,450	3,027,238	2,501,841	18,929,093	17,765,291
Net loss for the year	\$ 5,079,891	\$ 7,116,422	\$8,401,951	\$6,573,970	\$13,481,842	\$13,690,392

⁽¹⁾Headquarters administration expense for 1964 has been distributed on the basis of labour costs. In 1963 the distribution was on the basis of the total of the income and expense of each Section.

STATEMENT OF DEFICIT
FOR THE YEAR ENDED DECEMBER 31, 1964

	Montreal — Lake Ontario <u>Section</u>	Welland <u>Section</u>	<u>Total</u>
Balance as at January 1, 1964	\$30,822,598	\$20,802,188	\$51,624,786
Add			
Loss for the year, per Statement of Income and Expense . . .	<u>5,079,891</u>	<u>8,401,951</u>	<u>13,481,842</u>
Balance as at December 31, 1964	<u><u>\$35,902,429</u></u>	<u><u>\$29,204,139</u></u>	<u><u>\$65,106,628</u></u>

STATEMENT OF HEADQUARTERS ADMINISTRATION AND ENGINEERING EXPENSE FOR THE YEAR ENDED DECEMBER 31, 1964

(with comparative figures for the year ended
December 31, 1963)

	1964	1963
HEADQUARTERS ADMINISTRATION		
Salaries of members and executive officers	\$ 144,508	\$ 111,260
Other salaries	797,334	779,453
Employee benefits	87,221	75,042
Office expenses	53,690	45,042
Travel and removal	46,280	33,221
Communications	35,621	31,391
Grants in lieu of municipal taxes	30,255	28,751
Rental of office machines	28,566	28,276
Office accommodation	22,400	22,395
Miscellaneous	27,681	52,292
	<u>1,273,556</u>	<u>1,207,123</u>
Less portion allocated to		
Non-toll canals	150,744	196,761
Construction costs	97,476	—
	<u>248,220</u>	<u>196,761</u>
Total per Statement of Income and Expense	<u>\$1,025,336</u>	<u>\$1,010,362</u>

ENGINEERING		
Salaries and wages	\$ 608,066	\$ 427,336
Employee benefits	56,272	41,924
Office accommodation	52,276	31,874
Travel and removal	50,570	19,175
Office expenses	45,521	25,870
Miscellaneous	20,398	30,580
	<u>833,103</u>	<u>576,759</u>
Less portion allocated to		
Non-toll canals	12,468	64,682
Construction costs	688,121	282,751
	<u>700,589</u>	<u>347,433</u>
Total per Statement of Income and Expense	<u>\$ 132,514</u>	<u>\$ 229,326</u>

CAPITAL ASSETS AS AT DECEMBER 31, 1964

(with comparative figures as at December 31, 1963)

	Montreal — Lake Ontario Section, at cost	North Channel Bridge, at cost	Welland Section		Totals	
			Acquired, at cost	Entrusted, at transfer value	Total	
Land	\$ 8,940,716	\$ 501,804	\$ 1,327,752	\$ 1,922,848	\$ 3,250,600	\$ 12,693,120
Buildings	1,761,054	1,005,004	18,737	3,522,055	3,540,792	6,283,023
Channels and Canals	116,946,324	—	28,191,804	36,435,591	64,627,395	181,573,719
Locks	115,206,852	—	5,539,395	78,925,456	84,464,851	199,671,703
Bridges	25,528,981	7,067,984	176,445	8,340,817	8,517,262	41,114,227
Gatelifters	2,688,753	—	468	772,220	772,688	3,461,441
Movable equipment — including shore, floating, shop and other equipment	979,692	—	459,633	576,496	1,036,129	2,015,821
Works under construction	169,693	—	4,884,866	—	4,884,866	5,054,559
	272,222,065	8,574,792	40,599,100	130,495,483	171,094,583	448,227,234
Remedial Works — expenditures on property owned by others	46,005,521	—	7,039	—	7,039	45,761,583
	\$318,227,586	\$8,574,792	\$40,606,139	\$130,495,483	\$171,101,622	\$493,988,817

Note:—The Authority also administers non-toll canals and other properties at Lachine, Cornwall, Sault Ste. Marie and the Niagara Peninsula, comprising land and improvements with a cost valuation of \$48,913,618 and moveable equipment with a cost valuation of \$1,192,476.

NON-TOLL CANALS

Statement of Expense, Income and Capital Expenditures for the year ended December 31, 1964

(with comparative figures for the year ended
December 31, 1963)

	<u>1964</u>	<u>1963</u>
Expense		
Operation and maintenance:		
Salaries and wages	\$1,256,651	\$1,238,369
Employee benefits	124,665	128,175
Major maintenance materials and services	194,556	696,893
Other materials and services	251,643	210,285
Loss on disposal of obsolete materials	(30,297)	114,120
Grants in lieu of municipal taxes	420,891	637,559
Special grants to municipalities	40,000	473,000
	<u>2,258,109</u>	<u>3,498,401</u>
Administration and engineering expense (portion applicable to non-toll canals)	354,587	461,986
Total expense	<u>2,612,696</u>	<u>3,960,387</u>
Income		
Rentals	368,168	331,526
Wharfage	58,894	41,082
Miscellaneous	197,980	186,466
Total income	<u>625,042</u>	<u>559,074</u>
Operating deficit	1,987,654	3,401,313
Capital expenditures		
Construction of works	290,164	113,486
Acquisition of equipment	3,317	50,090
	<u>293,481</u>	<u>163,576</u>
Net expenditures	<u>\$2,281,135</u>	<u>\$3,564,889</u>
Recovered from:		
Department of Transport 1963-64 appropriations, Vote 230	\$ 805,588	
Department of Transport 1964-65 appropriations, Vote 105	1,247,293	
	2,052,881	
Balance to be recovered from appropriations	228,254	
	<u>\$2,281,135</u>	

CANAUX NON SOUMIS AU PÉAGE

*Etat des dépenses, des recettes et des dépenses en immobilisations
pour l'année terminée le 31 décembre 1964
(avec chiffres comparatifs de l'année terminée
le 31 décembre 1963)*

	1964	1963
Dépenses		
Exploitation et entretien		
Traitement et salaires	\$1,256,651	\$1,238,369
Prestations aux employés	124,665	128,175
Travaux d'entretien importants, matériaux et services	194,556	696,893
Autres matériaux et services	251,643	210,285
Perte relative à la disposition de matériaux défectueux	(30,297)	114,120
Subventions tenant lieu d'impôts municipaux	420,891	637,559
Subventions spéciales à des municipalités	40,000	473,000
Administration et services techniques (partie applicable aux canaux non soumis au péage)	2,258,109	3,498,401
Dépenses totales	2,612,696	3,960,387
Recettes		
Loyers	368,168	331,526
Droits d'accostage et de terre-plein	58,894	41,082
Divers	197,980	186,466
Recettes totales	625,042	559,074
Déficit d'exploitation	1,987,654	3,401,313
Dépenses en immobilisations		
Construction d'ouvrages	290,164	113,486
Acquisition de matériel	3,317	50,090
Dépenses nettes	\$2,281,135	\$3,564,889
Récupéré sur		
Crédits du ministère des Transports 1963-1964, no 230	\$ 805,588	
Crédits du ministère des Transports 1964-1965, no 105	1,247,293	
Solde à récupérer sur les crédits	228,254	
	<u>\$2,281,135</u>	

IMMOBILISATIONS AU 31 DÉCEMBRE 1964

(avec chiffres comparatifs au 31 décembre 1963)

	Section de Montréal au lac Ontario	Pont du du chenal nord, au prix coûtant	Section de Welland		Totaux		
			Acquises, au prix coûtant	Conféees, à la valeur de cession	Total	1964	1963
Terrain	\$ 8,940,716	\$ 501,804	\$ 1,327,752	\$ 1,922,848	\$ 3,250,600	\$ 12,693,120	\$ 12,138,034
Bâtiments	1,761,054	1,005,004	18,737	3,522,055	3,540,792	6,306,850	6,283,023
Chenaux et canaux	116,946,324	—	28,191,804	36,435,591	64,627,395	181,573,719	181,374,564
Écluses	115,206,852	—	5,539,395	78,925,456	84,464,851	199,671,703	199,491,885
Ponts	25,528,981	7,067,984	176,445	8,340,817	8,517,262	41,114,227	41,090,550
Lève-portes.	2,688,753	—	468	772,220	772,688	3,461,441	3,258,102
Matériel mobile-y compris le matériel flottant, riverain, d'atelier et autre	979,692	—	459,633	576,496	1,036,129	2,015,821	2,414,969
Ouvrages en construction.	169,693	—	4,884,866	—	4,884,866	5,054,559	2,176,107
	272,222,065	8,574,792	40,599,100	130,495,483	171,094,583	451,891,440	448,227,234
Ouvrages de protection, dépenses sur des biens appartenant à d'autres .	46,005,521	—	7,039	—	7,039	46,012,560	45,761,583
	\$318,227,586	\$ 8,574,792	\$40,606,139	\$130,495,483	\$171,101,622	\$497,904,000	\$493,988,817

REMARQUE—L'Administration administre en outre des canaux non soumis au péage et d'autres biens à Lachine, à Cornwall, au Sault-Sainte-Marie et dans la péninsule de Niagara, dont la valeur au prix coûtant est de \$48,913,618, et du matériel mobile dont la valeur au prix coûtant est de \$1,192,476.

ETAT DES DEPENSES DE L'ADMINISTRATION CENTRALE ET DES SERVICES TECHNIQUES POUR L'ANNEE TERMINEE LE 31 DECEMBRE 1964

(avec chiffres comparatifs de l'année terminée
le 31 décembre 1963)

ADMINISTRATION CENTRALE

1964	1963
\$ 144,508	\$ 111,260
797,334	779,453
87,221	75,042
53,690	45,042
46,280	33,221
35,621	31,391
30,255	28,751
28,566	28,276
22,400	22,395
27,681	52,292
1,273,556	1,207,123
150,744	196,761
97,476	—
248,220	196,761
\$ 1,025,336	\$ 1,010,362
Total, selon l'état des recettes et des dépenses	
Moins partie applicable aux	
Canaux non soumis au péage	
Frais de construction	
Traitements des membres et du personnel de direction	
Autres traitements et salaires	
Prestations aux employés	
Frais de bureau	
Voyages et déménagements	
Communications	
Subventions tenant lieu d'impôts municipaux	
Location de machines de bureau	
Bureaux	
Divers	

SERVICES TECHNIQUES

\$ 608,066	\$ 427,336
56,272	41,924
52,276	31,874
50,570	19,175
45,521	25,870
20,398	30,580
833,103	576,759
Moins partie applicable aux	
Canaux non soumis au péage	
Frais de construction	
12,468	64,682
688,121	282,751
700,589	347,433
\$ 132,514	\$ 229,326
Total, selon l'état des recettes et des dépenses	

ÉTAT DU DÉFICIT POUR L'ANNÉE TERMINÉE LE 31 DÉCEMBRE 1964

	Section de Montréal au lac Ontario	Section de Welland	Total
Solde au 1er janvier 1964	\$30,822,598	\$20,802,188	\$51,624,786
Ajouter :			
Pertes de l'année, selon l'état des recettes et des dépenses	5,079,891	8,401,951	13,481,842
Solde au 31 décembre 1964	\$35,902,489	\$29,204,139	\$65,106,628

ÉTAT DES RECETTES ET DES DÉPENSES POUR L'ANNÉE TERMINÉE LE 31 DÉCEMBRE 1964

(avec chiffres comparatifs de l'année terminée
le 31 décembre 1963)

	Section de Montréal au lac Ontario		Section de Welland		Totaux	
	1964	1963	1964	1963	1964	1963
Recettes						
Pages	\$13,544,436	\$10,730,418	\$	\$	\$13,544,436	\$10,730,418
Loyers	48,946	31,155	427,604	422,791	476,550	453,946
Droits d'accrochage et de terre-plein	1,262	884	246,790	135,385	248,052	136,269
Seaway International Bridge Corporation Ltd. — recettes nettes	198,889	193,391	—	—	198,889	193,351
Intérêts	144,575	150,373	25,248	22,014	169,823	172,387
S.I.S., Hercules — droits de levage de charges lourdes	52,250	15,480	—	—	52,250	15,480
Divers	118,454	144,088	241,853	199,284	360,307	343,372
	14,108,612	11,265,749	941,495	779,474	15,050,107	12,045,223
Dépenses						
Exploitation et entretien						
Traitement et salaires	1,493,103	1,264,659	2,779,844	2,572,983	4,272,947	3,837,642
Prestations aux employés	134,460	131,742	285,214	280,782	419,674	412,524
Travaux d'entretien importants, matériaux et services	348,074	148,308	1,215,590	564,021	1,563,664	712,329
Subventions tenant lieu d'impôts municipaux	27,737	37,659	338,929	345,108	366,666	382,767
Relèvement du trafic effectué en vue de réduire les encombrements	—	—	256,073	—	256,073	—
Exploitation de ponts par des compagnies de chemin de fer	70,587	64,360	78,890	93,355	149,477	157,715
Service de sécurité	61,790	37,764	—	—	64,790	37,764
Ajustements d'inventaires	61,220	—	41,479	—	102,699	—
Autres matériaux et services	402,534	468,787	296,648	221,685	699,182	690,472
	2,602,505	2,153,279	5,292,667	4,077,934	7,895,172	6,231,213
Administration régionale						
Traitement et salaires	297,148	317,252	255,366	241,997	552,514	559,249
Prestations aux employés	32,109	32,295	23,678	25,168	55,787	57,463
Frais de bureau	22,476	15,614	27,942	20,561	40,418	36,115
Voyages et démenagements	16,792	7,366	6,135	31,432	31,432	13,501
Divers	33,742	24,896	27,316	8,682	61,058	33,578
	402,267	397,423	338,942	302,543	741,209	699,966
Moins: partie applicable aux canaux non soumis au péage	160,505	171,196	30,870	29,347	191,375	200,543
	241,762	226,227	308,072	273,196	549,834	499,423
Administration centrale ^(u) (Annexe A)	387,577	665,125	637,759	345,237	1,025,336	1,010,362
Services techniques (Annexe A)	54,804	74,090	77,710	155,236	132,514	229,326
	442,381	739,215	715,469	500,473	1,157,850	1,239,688
Dépenses totales	3,286,648	3,118,721	6,316,208	4,851,603	9,602,856	7,970,324
Perte nette d'exploitation avant provision pour intérêts et renouvellement des machines et du matériel	10,821,964	8,147,028	(5,374,713)	(4,072,129)	5,447,251	4,074,899
Intérêts sur prêts de l'État (à l'exclusion de la somme de \$28,333 ajoutée aux frais de construction)	15,444,825	14,712,243	2,619,402	2,091,794	18,064,227	16,804,037
Provision pour renouvellement des machines et du matériel	457,030	551,207	407,836	410,047	864,866	961,254
	15,901,855	15,263,450	3,027,238	2,501,841	18,929,093	17,765,291
Perte nette de l'année	\$ 5,079,891	\$ 7,116,422	\$8,401,951	\$6,573,970	\$13,481,842	\$13,690,392

(u) Les dépenses de l'administration centrale pour 1964 ont été réparties suivant les frais de main-d'oeuvre. En 1963, la répartition avait été faite suivant le total des recettes et des dépenses de chaque section.

REMARQUES CONCERNANT LES ETATS FINANCIERS

1. Les sommes restant à verser relativement aux contrats dont les travaux n'étaient pas terminés au 31 décembre 1964 s'élevaient à environ \$5,600,000.
2. Une demande de réclamation supplémentaire relative à l'exécution d'un contrat, qui était originai-ment de \$188,000, n'était pas encore réglée le 31 décembre 1964. L'offre de \$36,000, faite par l'Administration avec l'approbation du Conseil du Trésor, en 1961, a été rejetée par l'entrepreneur. Ce dernier a intenté une poursuite contre l'Administration et réclame \$254,000 et les intérêts.
3. L'Administration estime à un million de dollars la somme à verser pour l'indemnisation des biens en voie d'expropriation au 31 décembre 1964.
4. Conformément aux dispositions du décret C.P. 1964-2036 du 23 décembre 1964, le montant principal des emprunts productifs d'intérêts obtenus en vertu de l'article 25 de la Loi sur l'Admini-stration de la voie maritime du Saint-Laurent pour le financement de la construction de la voie maritime, plus les intérêts précédemment différés et tous les autres intérêts courus ou à échoir au 31 décembre 1966, devra être remboursé, avec les intérêts courants, en quarante-trois versements annuels égaux, à compter du 31 décembre 1967.
5. Les péages dans la section de Welland sont suspendus depuis juillet 1962. Le budget supplémen-taire des dépenses présenté à la Chambre des communes le 19 mars 1965 prévoit: a) la conversion, au 1^{er} janvier 1965, de la dette de l'Administration, au montant de 21 millions de dollars, relative au canal de Welland, en emprunt non productif d'intérêts et b) le versement à l'Administration, au 1^{er} janvier 1965, d'un montant de \$27,092,866 relativement au déficit accumulé du canal de Welland subi par l'Administration durant les années civiles 1959 à 1964.
6. La réserve pour le renouvellement des machines et du matériel, qui était de \$4,821,830 au 31 dé-cembre 1964, représente la réserve accumulée pour le renouvellement des biens qui, de l'avis de l'Administration, devront être remplacés. Rien n'a été prévu dans les comptes pour le remplacement des bâtiments, des portes d'écluse, des écluses et des ponts. L'Administration estime que ces ouvrages de la voie maritime peuvent être tenus en état de fonctionnement en tout temps dans le cadre de son programme d'entretien.

PASSIF

Exigibilités:		
Comptes créditeurs et passif cumulé	\$ 2,148,670	\$ 1,723,631
Somme due à la Saint Lawrence Seaway Development Corporation		
pour péages	47,314	56,614
Retenues des entrepreneurs	129,658	158,167
Total des exigibilités	2,325,642	1,938,412
Dépôts de garantie des entrepreneurs et garanties de péages (contre-partie)	619,881	398,740
Réserve pour renouvellement des machines et du matériel	4,821,830	4,254,283
Part de propriétaire du Gouvernement du Canada:		
Immobilisations confiées à l'Administration par le		
gouverneur en conseil en vertu de l'article 14 de la Loi	130,716,890	130,716,890
Emprunts en vertu de l'article 25 de la Loi		
Produits d'intérêts	348,500,000	348,500,000
Non productifs d'intérêts	6,000,000	1,000,000
Intérêts sur emprunts — paiement différé	78,997,233	66,261,051
Déduire: déficit, selon l'état du déficit	564,214,123	546,477,941
Part nette	499,107,495	494,853,155
	\$506,874,848	\$501,444,590

J'ai examiné le bilan ci-dessus ainsi que l'état des recettes et des dépenses sy
rapportant, et j'ai présenté un rapport au ministre des Transports le 30 mars 1965.

A. M. HENDERSON
L'Auditeur général du Canada,

(Crée par la Loi sur l'Administration

Bilan arrêté a

(avec chiffres compa

ACTIF

1964	1963
\$ 92,844	\$ 345,697
6,741,577	5,173,225
228,254	557,224
584,289	356,613
129,540	—
549,463	599,274
8,325,967	7,032,033
Total des disponibilités	
Bons du Trésor du Canada et dépôts bancaires à court terme.	
Dette du Gouvernement du Canada — canaux non soumis	
au péage (état I)	
Comptes débiteurs (moins provision pour créances douteuses)	
Subventions à des municipalités payées en trop	
Inventaires des matériaux, du matériel secondaire et des	
travaux d'atelier en cours, au prix coûtant	
(moins réserve pour matériel désuet)	
Cautiounnements et espèces détenus à titre de dépôts de	
garantie des entrepreneurs et de garanties de péages (contre-partie)	
619,881	398,740
25,000	25,000
Investissement et prêts — Seaway International Bridge Corporation Ltd.	
497,904,000	493,988,817
Immobilisations, au prix coûtant ou à la valeur de cession (Annexe B)	

Les remarques annexées font partie intégrante du présent état.

Certifié exact:

J. M. MARTIN
Le Directeur des finances et de la comptabilité,

Approuvé:

R. J. RANKIN
Le Président,

Conformément à ces arrangements financiers, les intérêts sur les opérations de l'année s'élèvent à \$17,996,788 sur les emprunts à long terme (un montant supplémentaire de \$28,333 est compris dans les frais de construction), mais ces intérêts n'ont pas été payés et ont été portés au bilan sous Part de propriétaire du gouvernement du Canada. Rien n'a été porté aux opérations de l'année à l'égard de l'amortissement du principal des sommes empruntées. Des intérêts au montant de \$67,439 sur des emprunts à court terme ont été payés au cours de l'année et les intérêts différés de 1961 ont été réduits par suite d'un versement de \$5,288,940.

Les frais d'exploitation et d'entretien des canaux et des ouvrages relevant de l'Administration sont définis, en vertu de l'alinéa c) de l'article 16, comme comprenant tous les frais d'exploitation de l'Administration ainsi que les réserves qui peuvent être approuvées par le Ministre. L'Administration est d'avis qu'il n'est pas nécessaire d'inclure la dépréciation dans les frais d'exploitation et d'entretien et que l'amortissement au cours d'une période de cinquante ans du principal des emprunts ainsi que des intérêts, comme l'exigent les alinéas a) et b), satisfait aux exigences de la Loi. Les frais afférents à l'année ne comprennent donc aucune réserve pour la dépréciation. Une somme de \$864,866 a été prévue, au cours de l'année à l'étude, pour le remplacement des machines et du matériel, notamment de ceux des écluses, ponts et bâtiments. Cette hausse a porté la réserve pour le renouvellement des machines et du matériel à \$4,821,830 au 31 décembre 1964.

Aucune somme n'a été affectée dans les comptes à l'égard du remplacement des bâtiments, des portes d'écluse, des écluses et des ponts. L'Administration estime que ces ouvrages de la voie maritime peuvent être tenus constamment en bon état dans le cadre de son programme d'entretien.

En conformité des prescriptions de l'article 87 de la Loi sur l'administration financière et sous réserve des observations qui précèdent, je déclare qu'à mon avis

- a) l'Administration a tenu des livres de comptabilité appropriés;
- b) les états financiers de l'Administration
(i) ont été préparés sur une base comparable à celle de l'année précédente et concordent avec les livres de comptabilité;
- (ii) dans le cas du bilan, donnent un exposé juste et fidèle de l'état des affaires de l'Administration
- (iii) dans le cas de l'état des recettes et des dépenses, donnent un exposé juste et fidèle des recettes et des dépenses de l'Administration pour l'année financière; et
- c) les opérations de l'Administration venues à ma connaissance étaient de la compétence de l'Administration aux termes de la Loi sur l'administration financière et de toute autre loi applicable à l'Administration.

L'Auditeur général,
A. M. HENDERSON.

L'HONORABLE J. W. PICKERSGILL,
MINISTRE DES TRANSPORTS,
OTTAWA.

J'ai examiné les comptes et les états financiers suivants de l'Administration de la voie maritime du Saint-Laurent pour l'année terminée le 31 décembre 1964:

Bilan

Etat des recettes et des dépenses pour l'année terminée le 31 décembre 1964

Etat du déficit pour l'année terminée le 31 décembre 1964

Etat des dépenses de l'administration centrale et des services techniques

pour l'année terminée le 31 décembre 1964

Immobilisations au 31 décembre 1964

Canaux non soumis au péage

Etats des dépenses, des recettes et des dépenses en immobilisations

pour l'année terminée le 31 décembre 1964

Etat I

En vertu de l'article 25 de la Loi sur l'Administration de la voie maritime du Saint-Laurent, le ministre des Finances, avec l'approbation du gouverneur en conseil, peut de temps à autre consentir des prêts à l'Administration. L'article 13 de la Loi, dans sa forme modifiée, stipule que l'ensemble des montants ainsi empruntés en vertu de la Loi et non encore remboursés ne doit jamais dépasser 535 millions de dollars.

Le bilan ci-joint indique qu'au 31 décembre 1964, l'Administration devait au gouvernement du Canada à l'égard des emprunts et des intérêts différés, une somme de \$433,497,233 se répartissant ainsi:

Emprunts contractés en vertu de l'article 25 de la Loi	\$348,500,000
Produits d'intérêts	Non productifs d'intérêts
Intérêts au 31 décembre 1959—différés	6,000,000
Intérêts pour l'année 1961—différés	19,427,117
Intérêts pour l'année 1962—différés	9,000,000
Intérêts pour l'année 1963—différés	15,671,952
Intérêts pour l'année 1964—différés	16,873,043
Intérêts pour l'année 1964—différés	18,025,121
	\$433,497,233

En vertu de l'article 16 de la Loi sur l'Administration de la voie maritime du Saint-Laurent, les péages sont destinés à assurer un revenu suffisant pour couvrir les frais d'exploitation de l'Administration, lesquels comprennent des versements à l'égard des intérêts sur les montants empruntés par l'Administration et des versements suffisants pour amortir le principal des montants empruntés en une période d'au plus cinquante ans. Aux termes de ces dispositions, les conditions initiales selon lesquelles des prêts étaient consentis à l'Administration en vertu de l'article 25 de la Loi, n'exigeaient le paiement des intérêts que pendant les trois premières années entières d'exploitation (soit jusqu'au 31 décembre 1962); par la suite, il devait être payé des montants annuels suffisants pour amortir en quarante-sept ans (c'est-à-dire au cours d'une période se terminant le 31 décembre 2009) tous les emprunts et intérêts y afférents. Les termes des arrangements financiers de l'Administration ont été modifiés en 1961, en 1963 et de nouveau en 1964. Ils prévoient maintenant le remboursement de tous les emprunts productifs d'intérêts, plus les intérêts précédemment différés et tous les autres intérêts courus ou à échoir au 31 décembre 1966, ainsi que les intérêts courants, en quarante-trois versements annuels égaux, à compter du 31 décembre 1967.

ÉTAT DES RECETTES ET DES DÉPENSES

		Section de Montréal au lac Ontario		Section de Welland		
		Modifica- tion en 1964	1er août 1964 au 31 décembre 1964	Modifica- tion en 1964	1er avril 1959 au 31 décembre 1964	Total au 31 décembre 1964
Recettes nettes						
Du gouvernement du Canada		\$ —	\$326,700,000	\$5,000,000	\$27,800,000	\$354,500,000
Prêts		—	—	3,985,784	32,946,963	32,946,963
Paiements en espèces des intérêts, différés		—	326,700,000	8,985,784	60,746,963	387,446,963
D'exploitation						
Profit avant provision pour intérêts		10,364,933	39,635,768	—	—	39,635,768
Provision pour renouvellement		457,030	2,844,614	407,836	2,173,013	5,017,627
Divers		243,303	1,049,698	24,439	247,835	1,297,533
Recettes nettes totales		11,065,266	43,530,080	432,275	2,420,848	45,950,928
		11,065,266	370,230,080	9,418,059	63,167,811	433,397,891
Dépenses						
Immobilisations — additions brutes		632,402	328,030,700	3,847,842	40,674,741	368,705,441
Intérêts d'exploitation		9,313,830	39,405,870	—	—	39,405,870
Perte avant provision pour intérêts		—	—	5,782,559	19,286,257	19,286,257
Dépenses nettes totales		9,946,232	367,436,570	9,630,391	59,960,998	427,397,568
Fonds retenus (fonds de roulement)		\$ 1,119,034	\$ 2,793,510	\$ (212,332)	\$ 3,206,813	\$ 6,000,323
ÉTAT DES INTÉRÊTS D'EXPLOITATION						
Intérêts imputés à l'exploitation (1959-1964)		\$15,444,825	\$ 75,538,258	\$2,619,402	\$ 9,917,882	\$ 85,456,140
Ajouter: Paiements en espèces des intérêts, différés		—	—	3,985,784	32,946,963	32,946,963
		15,444,825	75,538,258	6,605,186	42,864,845	118,403,103
Déduire: Intérêts différés et échus — 31 déc. 1964		6,130,995	36,132,388	6,605,186	42,864,845	78,997,233
Réduction du passif au compte des intérêts		\$ 9,313,830	\$ 39,405,870	\$ —	\$ —	\$ 39,405,870

ÉTAT DES INTÉRÊTS D'EXPLOITATION

FINANCES — POINTS SAILLANTS

(En millions de dollars)

VOIE MARITIME

Secteur de Montréal au lac Ontario							
(1) La dette égale les emprunts plus les intérêts différés							
Année	Cargaisons tonnes	Recettes	Frais	Profit net d'exploitation	Intérêts	Perte de l'année	Dette (1) à la fin de l'année
*1959	20.6	\$ 7.4	\$1.8	\$ 5.6	\$ 7.4	\$1.8—	\$283.4
1960	20.3	7.3	2.5	4.8	11.5	6.7—	300.6
1961	23.4	8.2	2.8	5.4	12.7	7.3—	321.2
1962	25.6	9.2	3.4	5.8	13.8	8.0—	337.1
1963	30.9	11.2	3.6	7.6	14.7	7.1—	356.7
1964	39.3	14.2	3.8	10.4	15.5	5.1—	362.8
*Frais d'exploitation et intérêts pour neuf mois							
Secteur de Welland							
1959	27.5	\$1.8	\$2.6	\$0.8—	\$0.7	\$1.5—	\$ 26.6
1960	29.2	2.0	4.1	2.1—	1.2	3.3—	33.9
1961	31.5	2.2	4.9	2.7—	1.5	4.2—	40.5
*1962	35.4	1.4	4.8	3.4—	1.8	5.2—	45.9
1963	41.2	0.8	5.3	4.5—	2.1	6.6—	59.1
1964	51.4	0.9	6.7	5.8—	2.6	8.4—	70.7
*Les péages dans le canal de Welland ont été suspendus le 18 juillet 1962.							
(à l'exclusion des anciens canaux de Welland)							
Année	Cargaisons tonnes	Frais	Recettes	Perte nette d'exploitation	Immobilisations	Terrain	Crédit
Canal de Lachine							
1959	1.2	\$0.5	\$0.3	\$0.2	\$0.4	\$—	\$0.6
1960	1.2	0.8	0.3	0.5	0.1	—	0.6
1961	1.1	0.8	0.3	0.5	—	—	0.5
1962	.9	1.4	0.3	1.1	0.1	—	1.2
1963	.7	2.0	0.3	1.7	0.1	—	1.8
1964	.6	1.1	0.4	0.7	—	—	0.7
Canal de Cornwall							
1959	.2	\$0.2	\$—	\$0.2	\$0.1	\$—	\$0.3
1960	.2	0.5	0.1	0.4	—	—	0.5
1961	.2	0.5	0.1	0.4	—	—	0.4
1962	.2	0.6	0.1	0.5	—	—	0.5
1963	.2	0.8	0.2	0.6	—	—	0.6
1964	.1	0.8	0.2	0.6	—	0.3	0.9
Canal de Sault-Sainte-Marie							
1959	1.2	\$0.2	\$—	\$0.2	\$—	\$—	\$0.2
1960	1.7	0.4	—	0.4	—	—	0.4
1961	1.1	0.5	—	0.5	—	—	0.5
1962	1.1	0.5	—	0.5	—	—	0.5
1963	.8	0.6	—	0.6	—	—	0.6
1964	.9	0.6	—	0.6	—	—	0.6

SOMMAIRE DU TRAFIC DE L'ANNÉE 1964

Section de Montréal au lac Ontario		Section de Welland	
Nombre de transits	6,779	8,304	
Jauge nette au registre	40,588,147	54,866,566	
Tonnage des cargaisons —			
en vrac	35,632,442	48,299,234	
diverses	3,676,587	3,089,278	
Total	39,309,029	51,388,512	
Principales denrées			
Blé	9,189,877	9,807,835	
Mais	3,216,214	3,430,853	
Orge	1,218,718	1,467,547	
Charbon	801,859	6,292,642	
Minéral de fer	12,157,448	16,830,620	
Huile combustible	1,507,849	922,081	
Papier-journal	349,062	474,758	

TRAFFIC DES CANAUX NON SOUMIS AU PÉAGE EN 1964

Nombre de transits	1,046	154	3,011
Jauge brute au registre	947,098	129,936	3,780,235
Tonnage des cargaisons	576,310	72,893	933,326
Canal de Lachine	Canal de Cornwall	Canal de Sault-Sainte-Marie	

Compagnie canadienne de l'exposition universelle et la ville de Montréal se trouvent dans l'obligation de construire une chaussée surélevée à travers le canal et de prolonger la rue de l'Université. Cette voie sera la principale artère reliant l'île de Montréal au terrain de l'extrémité sud et s'étend du tunnel de la rue Wellington jusqu'aux limites amont du port de Montréal en aval de l'écluse n° 1. Très peu de navires ont utilisé cette partie du canal au cours des dernières années.

De nouvelles conventions de travail applicables aux employés de l'Administration ont été négociées, au cours de 1964, avec la Fraternité canadienne des cheminots, employés des transports et autres ouvriers.

Le 31 décembre 1964, le personnel comptait 1,421 membres dont 112 étaient occupés à des travaux se rapportant au programme d'amélioration de la section de Welland. Le personnel d'exploitation et d'entretien de la voie maritime a été réduit de 65 membres en 1964. L'Administration a établi un programme de sécurité très rigoureux visant tous les domaines de son activité et elle l'applique avec vigueur.

On a élaboré un projet en vue de faire porter un uniforme distinctif à tous les employés à l'exploitation en 1965.

On a augmenté les mesures de sécurité en dotant d'éclairage et de clôtures supplémentaires les endroits dangereux, conformément aux recommandations de la Gendarmerie royale du Canada.

On a commencé à St. Catharines (Ont.) la construction d'un immeuble destiné à abriter le bureau central de la région de l'Ouest et les plans d'un autre immeuble devant loger le bureau central de la région de l'Est, à Saint-Lambert (P.Q.), ont été terminés.

En dépit des bas niveaux sans précédent des eaux des Grands lacs et du fleuve Saint-Laurent, le tirant d'eau maximum régulier de 25½ pieds a été maintenu dans les principaux chenaux de la voie maritime durant toute la saison de navigation de 1964.

La section du fleuve Saint-Laurent a été ouverte à la navigation du 8 avril au 7 décembre, soit un total de 243 jours, la plus longue saison depuis l'inauguration de la voie maritime en 1959. Le canal de Welland a été ouvert du 30 mars au 15 décembre.

Le temps très froid de la fin de novembre et du début de décembre a rendu la navigation difficile dans la section du fleuve Saint-Laurent, particulièrement aux environs de Côte Sainte-Catherine et de Saint-Lambert. Les eaux qui descendent du lac Ontario ne produisent pas leur effet réchauffant jusque dans cette région et l'on a constaté que les glaces s'y forment plus rapidement qu'en amont. Les navires ont été avertis des conditions atmosphériques défavorables et du fait que la situation pourrait s'aggraver rapidement en ce qui concerne la formation des glaces. Cent neuf navires des-cendants sont sortis de l'écluse de Saint-Lambert après le 30 novembre, traversant des eaux dont la température était au point de congélation. De crainte d'avoir à passer l'hiver dans les Grands lacs, plusieurs de ces navires se sont hâtés de sortir du réseau sans prendre le temps de s'acquitter pleinement de leurs mandats relatifs aux cargaisons; le dernier d'entre eux partit le 7 décembre. Quatre océaniques qui n'ont pas quitté les ports des lacs assez tôt avant la prise des glaces pour pouvoir transiter d'Iroquois à Montréal ont dû hiverner dans les Grands lacs.

Il a été décidé de fermer une partie de l'ancien canal de Lachine à compter du 1^{er} février 1965, vu que la

à partir de la rive nord du golfe Saint-Laurent, et d'importantes expéditions de blé vers les marchés d'outre-mer ont marqué le début de la saison.

L'accroissement du trafic en 1964, alors qu'il y a eu 707 transits de plus qu'en 1963, a entraîné un encombrement très grave dans la section de Welland où existent 8 écluses, 19 ponts et une dénivellation de 326 pieds sur une distance de moins de 27 milles.

En vue de réduire cet embouteillage, l'Administration a retenu les services d'une maison d'experts en organisation du trafic qu'elle a chargé de déterminer la cause des retards et de trouver les moyens propres à corriger rapidement la situation.

On a établi que les retards découlaient des facteurs suivants:

a) un accroissement soudain et important du trafic en 1964, soit une augmentation de 25 p. 100 du tonnage et de 10 p. 100 du nombre de transits, comparativement à l'année 1963. Les navires des lacs ayant effectué des transits étaient plus gros dans bien des cas et transportaient de plus fortes cargaisons. Les océaniques, lesquels éprouvent les plus graves problèmes de navigation dans le canal, ont porté à 25 p. 100 de plus le nombre de leurs transits et augmenté leurs cargaisons d'environ 33 p. 100.

b) Des arrêts dus aux conditions atmosphériques, aux accidents et au manque de pilotes ont souvent contribué à allonger les files de navires en attente aux entrées du canal.

c) L'arrivée de navires par groupes a eu le même résultat.

Le programme visant à augmenter la capacité du canal au moyen du jumelage des écluses simples ne donnera pas ses pleins résultats avant plusieurs années. Il est évident que l'urgence du problème exige que parallèlement à l'exécution de ce programme, on prenne des mesures immédiates pour augmenter la capacité.

Le programme à court terme auquel collaborent ces experts et les fonctionnaires de l'Administration se poursuit de façon satisfaisante, de sorte qu'on peut compter sur une amélioration importante de la situation dès les saisons de navigation de 1965 et 1966. Les dépenses en immobilisations qui ont été faites en 1964 dans le cadre de ce programme s'élèvent à 3.8 millions de dollars.

Les intérêts seront différents durant une autre période de deux ans se terminant en 1966.

En 1964, le coût des intérêts a été de 18.1 millions (16.8 millions en 1963). Les gains provenant de la section de Montréal au lac Ontario sont, avant déduction des intérêts, de 10.4 millions (7.6 millions en 1963) tandis que pour la section de Welland, la perte est de 5.8 millions (4.6 millions en 1963), ce qui donne un profit net d'exploitation de 4.6 millions (3.1 millions en 1963). Pour la première fois, les états financiers donnent séparément le détail des recettes et des dépenses de deux sections de la voie maritime.

L'état des intérêts d'exploitation, qui apparaît à la page 9 du présent Rapport, révèle que sur le profit d'exploitation de la section de Montréal au lac Ontario pour l'année 1964, 9.3 millions ont été portés au compte des intérêts se rapportant à cette section laquelle a par conséquent rencontré 60 p. 100 du montant de 15.4 millions d'intérêts qui lui est imputable pour l'année. Depuis 1959, l'Administration a pu affecter les gains réalisés dans la section de Montréal au lac Ontario, soit 39.4 millions de dollars, au service des intérêts d'exploitation de 1959 à 1964 qui se sont élevés à 75.5 millions pour cette section. Le montant ainsi affecté représente 52 p. 100 du total des frais d'intérêts d'exploitation pour la section. Vu que les intérêts ont été différents, une grande partie de cette somme, soit 32.9 millions, a pu être employée au financement de la section de Welland et est comprise dans la dette attribuée à cette section.

Le total des péages revenant au Canada et aux États-Unis a été, pour la section de Montréal au lac Ontario, de 19.1 millions, soit une augmentation de près de 4 millions ou de plus de 26 p. 100 par rapport à 1963. En 1964, la part de ces recettes revenant à l'Administration a été de 13.5 millions (10.7 millions en 1963). Cette hausse provient directement de l'accroissement (27 p. 100) du tonnage des cargaisons transportées dans la section, qui a passé à 39.3 millions de tonnes, de 30.9 millions qu'il était en 1963.

Le tonnage des cargaisons qui ont emprunté la section de Welland, non soumise au péage, atteint 51.4 millions pour l'année 1964, soit 25 p. 100 de plus qu'en 1963.

Il y a eu un mouvement ininterrompu des cargaisons de minerais de fer transportées vers les ports du lac Érie

Le 31 mars 1965.

L'honorable J. W. Pickersgill
Ministre des Transports
Ottawa

Monsieur,

Je vous présente ci-joint le rapport de l'Administration de la voie maritime du Saint-Laurent pour la période allant du 1^{er} janvier au 31 décembre 1964.

Respectueusement,
Le Président,

R. J. RANKIN.

En 1964, sixième année d'exploitation de la voie maritime du Saint-Laurent, le trafic et les recettes ont atteint de nouveaux sommets au cours de la saison d'exploitation qui a été la plus longue jusqu'ici.

Les points saillants de l'année sont ces résultats sans précédent et le programme de modernisation du canal de Welland qui a été entrepris en 1964 et qui vise à une extension importante des installations du canal.

Malgré ces chiffres records du trafic et des recettes, une fois de plus, l'Administration se retrouve, à la fin de l'année, encore plus endettée avec des dettes qui ont augmenté de 17.7 millions de dollars au cours de l'année. Cette augmentation ne comprend que 5 millions d'emprunts, le reste étant des intérêts impayés.

On trouvera aux pages 10 à 19 du présent rapport les états financiers de l'Administration, établis au 31 décembre 1964, ainsi que le rapport de l'Auditeur général à ce sujet.

La perte nette de l'année 1964 a été de 13.5 millions de dollars comparativement à 13.7 millions en 1963. Le chiffre élevé de ces pertes tient à deux principaux facteurs. Il y a, en premier lieu, le fardeau des intérêts, lequel s'est alourdi de la nécessité de financer dans une mesure importante l'exploitation de la section de Welland pour les années 1959 à 1964 au moyen d'emprunts productifs d'intérêt. Le deuxième facteur est le coût d'exploitation même de la section de Welland.

Au cours des six années écoulées depuis le commencement de la navigation sur la voie maritime, le coût total des intérêts imputé au chapitre de l'exploitation s'est élevé à 85.5 millions de dollars. Durant cette période, la perte d'exploitation de la section de Welland, partie essentielle du réseau qui continue d'échapper au péage, a atteint un total de 19.3 millions de dollars. D'autre part, bien que les recettes et le trafic de chacune des six années aient été moins élevés qu'il n'avait été prévu, la section de Montréal au lac Ontario a rapporté des profits d'exploitation dont le total était de 39.6 millions à la fin de 1964. Cependant, ces profits sont loin d'être suffisants pour permettre à l'Administration de rencontrer ses obligations financières annuelles qui n'ont cessé d'augmenter. Cet état de choses a jusqu'ici empêché la voie maritime dans son ensemble de faire ses frais comme le prévoyaient les projets originaux.

Il a été proposé d'alléger le fardeau que constituent les frais d'exploitation et le coût des intérêts dans la section de Welland au moyen d'un crédit voté par le Parlement, mais pour que la voie maritime puisse jouer d'une saine situation financière, présente et future, il faut absolument que l'on trouve une solution pouvant régler de façon efficace et pour une longue période le problème de la voie maritime dans son ensemble.

Le tarif des péages a été établi en vertu d'un accord international intervenu entre le Canada et les Etats-Unis, en 1959, à la suite d'études et d'un rapport commun des comités des péages. Cet accord prévoyait que le tarif des péages devrait être révisé ultérieurement afin de déterminer s'il était suffisant pour permettre de satisfaire aux exigences de la loi, et qu'un rapport à ce sujet devrait être présenté par les deux organismes à leurs gouvernements respectifs avant le 1^{er} juillet 1964.

Au cours de 1964, un nouvel accord a été conclu qui prévoit une prolongation de deux ans du stade initial de développement de la voie maritime sans changements au régime des péages.

L'étude commune se poursuit et, à la fin de cette prolongation de deux ans, prévue par l'accord international, les organismes de la voie maritime ont l'intention de proposer un régime tarifaire correspondant de la façon la plus réaliste possible à leurs besoins financiers. En vertu du décret C.P. 1964-2036, du 23 décembre 1964,

SOMMAIRE FINANCIER

SECTION DE MONTRÉAL AU LAC ONTARIO

Recettes	\$14,108,612	\$11,265,749	+\$2,842,863
Dépenses d'exploitation et montant prévu pour le remplacement	3,743,678	3,669,928	+ 73,750
Recettes nettes d'exploitation	10,364,934	7,595,821	+ 2,769,113
Moins les intérêts les emprunts	15,444,825	14,712,243	+ 732,582
Perte nette de l'année	\$ 5,079,891	\$ 7,116,422	-\$2,036,531

SECTION DE WELLAND

Recettes (loyers, droits d'accostage et de terre-plein, etc.)	\$ 941,495	\$ 779,474	+\$ 162,021
Dépenses d'exploitation	6,724,044	5,261,650	+ 1,462,394
Perte nette d'exploitation	5,782,549	4,482,176	+ 1,300,373
Plus les intérêts sur les emprunts	2,619,402	2,091,794	+ 527,608
Perte nette de l'année	\$ 8,401,951	\$ 6,573,970	+\$1,827,981

SECTIONS COMBINÉES

Recettes	\$15,050,107	\$12,045,223	+\$3,004,884
Dépenses d'exploitation en montant prévu pour le remplacement	10,467,722	8,931,578	+ 1,536,144
Recettes nettes d'exploitation	4,582,385	3,113,645	+ 1,468,740
Moins les intérêts sur les emprunts	18,064,227	16,804,037	+ 1,260,190
Perte nette de l'année	\$13,481,842	\$13,690,392	-\$ 208,550

Changement

1963

1964

REVUE DE L'ANNÉE

SECTION DE MONTRÉAL AU LAC ONTARIO

1964	1963	Différence %
6,285	6,779	+ 7.9
39,309,029	30,942,890	+ 27.0
5,799	4,923	+ 17.8
40,588,147	35,030,711	+ 15.9
5,987	5,574	+ 7.4
19,085,247	15,122,282	+ 26.2
2,815	2,406	+ 17.0
Moyenne des péages par transit, en dollars		
6,779	6,285	+ 7.9
39,309,029	30,942,890	+ 27.0
5,799	4,923	+ 17.8
40,588,147	35,030,711	+ 15.9
5,987	5,574	+ 7.4
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5,799	4,923	+ 17.8
40,588,147	35,030,711	+ 15.9
5,987	5,574	+ 7.4
19,085,247	15,122,282	+ 26.2
2,815	2,406	+ 17.0
Moyenne des péages par transit, en dollars		

SECTION DE WELLAND**

8,304	7,597	+ 9.3
51,388,512	41,303,479	+ 24.4
6,188	5,437	+ 13.8
54,866,566	48,047,664	+ 14.2
6,607	6,324	+ 4.5
Moyenne de la jauge brute au registre par transit		
10,036	9,521	+ 5.4
55,779,142	45,570,207	+ 22.4
60,679,029	54,372,812	+ 11.6

TRAFFIC COMBINÉ***

10,036	9,521	+ 5.4
55,779,142	45,570,207	+ 22.4
60,679,029	54,372,812	+ 11.6

*Comprend la part des péages revenant au Canada et aux États-Unis.

**Péages sur le canal Welland suspendus le 18 juillet 1962.

***On a évité de compter deux fois le trafic utilisant les deux sections du canal dans un seul voyage, on a ainsi éliminé le double-emploi.

ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

PERSONNEL DE DIRECTION

président
R. J. RANKIN
vice-président
PIERRE CAMU
membre
PETER E. R. MALCOLM

Directeur de l'exploitation
R. J. BURNSIDE
Directeur des projets spéciaux
L. H. BURPEE
Avocat-conseil
JOHN T. CARVELL
Ingénieur en chef
W. R. MACKAY
Directeur des finances et de la comptabilité
J. M. MARTIN
Directeur de l'administration
T. J. QUIGG
Secrétaire
L. E. BELAND

Directeur, région de l'Est
R. L'HEUREUX
Directeur, région de l'Ouest
A. M. LUCE
Directeur du projet, Welland
W. A. O'NEIL

ADDRESSES

Bureaux d'Ottawa:
Bureaux de Cornwall:
Région de l'Est:
Région de l'Ouest:
Services techniques,
bureau central:
Welland, projet de
modernisation et
de jumelage:
Boîte postale 98, Cornwall (Ont.)
Boîte postale 97, Saint-Lambert (P.Q.)
Boîte postale 370, St. Catharines (Ont.)
5250, rue Ferrier, Montréal 9^e (P.Q.)
Boîte postale 592, St. Catharines (Ont.)

On peut se procurer un rapport détaillé sur le trafic de la voie maritime en 1964 chez l'Imprimeur de la Reine, n° de catalogue TS 2-2/1964, au prix de 75c. l'exemplaire.

Le Manuel de la voie maritime, qui renferme les circulaires et le règlement relatifs au transit dans la voie maritime, est en vente chez l'Imprimeur de la Reine, n° de catalogue TS 2-164F, au prix de \$5 l'exemplaire.

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N° de catalogue: TS 1-1964

1964

RAPPORT ANNUEL

L'ADMINISTRATION DE LA VOIE MARITIME
DU SAINT-LAURENT



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THE ST. LAWRENCE SEAWAY AUTHORITY
...
(ANNUAL) REPORT (1965)
(ADMINISTRATION DE LA VOIE MARITIME
DU SAINT-LAURENT
RAPPORT ANNUEL 1965)

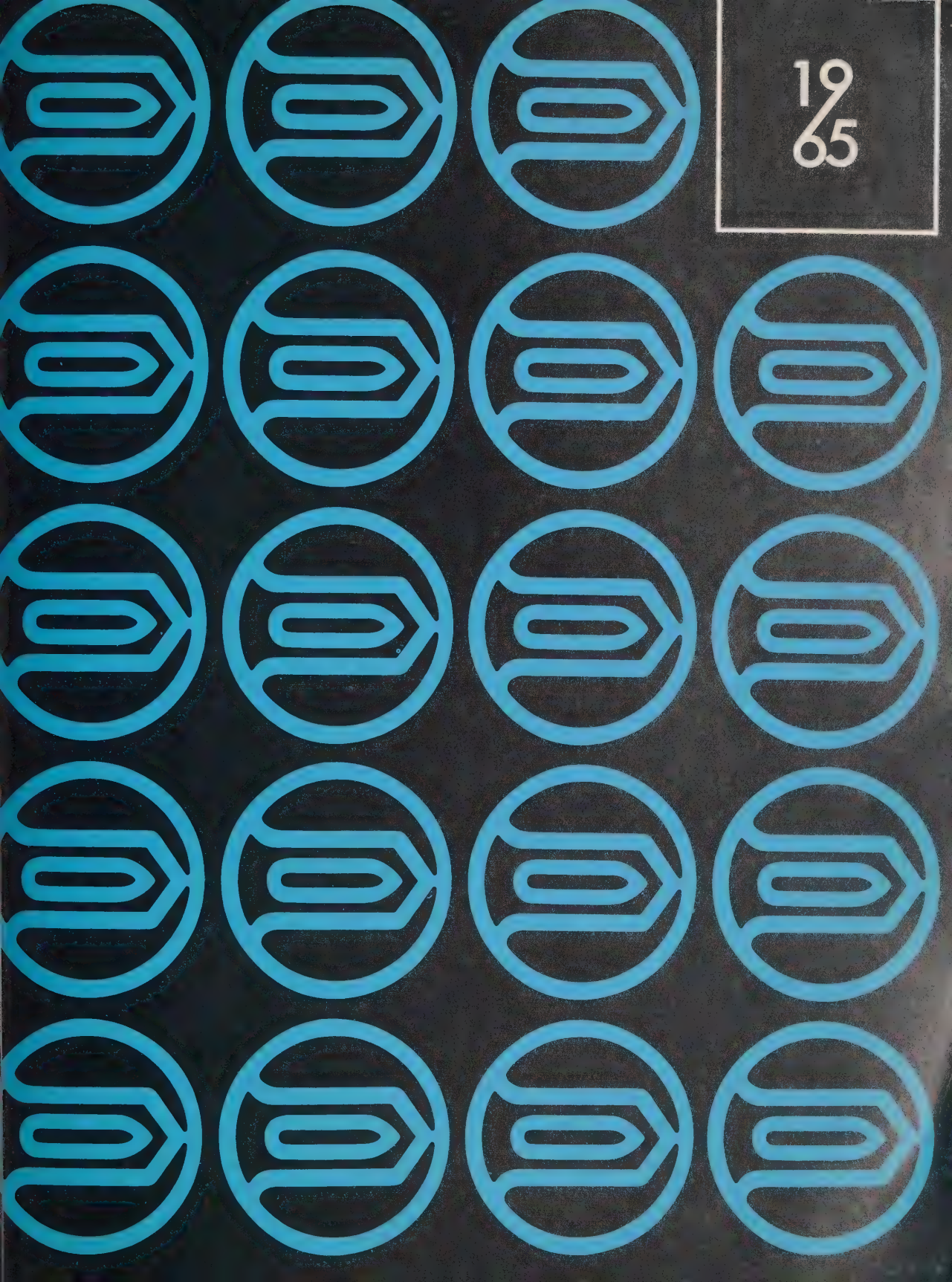




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ON PEUT SE PROCURER LE PRÉSENT RAPPORT ANNUEL CHEZ L'IMPRIMERIE DE LA REINE À OTTAWA ET DANS LES LIVRAIRES DU GOUVERNEMENT FÉDÉRAL. N° DE CATALOGUE TS1-1965, AU PRIX DE 35c. L'EXEMPLAIRE. LE RAPPORT SUR LE TRAFIC DE LA VOIE MARITIME EN 1965, N° DE CATALOGUE TS2-1965, AU PRIX DE 75c. L'EXEMPLAIRE. AINSI QUE LE MANUEL DE LA VOIE MARITIME, QUI CONTIENNE LES CIRCULAIRES ET LE RÈGLEMENT RELATIF AU TRANSIT DANS LA VOIE MARITIME, N° DE CATALOGUE TS2-1964, AU PRIX DE \$5 L'EXEMPLAIRE, Y SONT AUSSI EN VENTE.

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Executive Officers — Personnel de direction

President Président	Pierre Camu
Vice-President Vice-président	Peter E. R. Malcolm
Member Membre	Delmer E. Taylor
Director of Operations Directeur de l'exploitation	R. J. Burnside
Counsel Avocat-conseil	J. T. Carvell
Chief Engineer Ingénieur-en-chef	W. R. Mackay
Director of Finance & Accounting Directeur des finances et de la comptabilité	J. M. Martin
Director of Administration Directeur de l'administration	T. J. Quigg
Secretary Secrétaire	L. E. Béland
Director, Eastern Region Directeur, région de l'Est	R. L'Heureux
Director, Western Region Directeur, région de l'Ouest	A. M. Luce
Project Director, Welland Directeur du projet, Welland	W. A. O'Neil

Locations — Adresses

Head Office: Siège social:	396 Cooper Street, Ottawa 4, Ontario.
Cornwall Headquarters: Bureaux de Cornwall:	Corner of Pitt & Second Sts., Cornwall, Ontario.
Eastern Region: Région de l'Est:	Écluse de Saint Lambert, Saint Lambert, Québec.
Western Region: Région de l'Ouest:	508 Glendale Avenue, St. Catharines, Ontario.
Engineering Headquarters: Division du Génie, bureau central:	5250, rue Ferrier, Montréal 9 ^e , Québec.
Welland Modernization and Twinning Project: Welland, projet de modernisation et de jumelage:	508 Glendale Avenue, St. Catharines, Ontario.

THE YEAR IN BRIEF

SOMMAIRE DE L'ANNÉE

	1965	1964	Variation (%)	
MONTREAL-LAKE ONTARIO SECTION				SECTION DE MONTRÉAL AU LAC ONTARIO
Total number of transits	7,330	6,779	+ 8.1	Nombre total de transits
Total cargo tonnage	43,382,864	39,309,029	+ 10.4	Tonnage total des cargaisons
Average cargo tonnage per transit	5,919	5,799	+ 2.1	Tonnage moyen des cargaisons par transit
Total toll revenue in \$	21,809,012	19,085,247	+ 14.3	Total des péages, en dollars
Average toll revenue per transit in \$	2,975	2,815	+ 5.7	Moyenne des péages par transit, en dollars
WELLAND SECTION				SECTION DE WELLAND
Total number of transits	8,384	8,304	+ 1.0	Nombre total de transits
Total cargo tonnage	53,420,179	51,388,512	+ 4.0	Tonnage des cargaisons
Average cargo tonnage per transit	6,372	6,188	+ 3.0	Tonnage moyen des cargaisons par transit
TRAFFIC COMPOSITION				COMPOSITION DU TRAFIC
Montreal-Lake Ontario (Local)				Montréal au lac Ontario
Transits	2,174	1,732	+ 25.5	Transits
Total cargo	6,554,809	4,390,630	+ 49.2	Total des cargaisons
Welland (Local)				Welland
Transits	3,228	3,257	+ 0.8	Transits
Total cargo	16,592,124	16,470,113	+ 0.7	Total des cargaisons
Through Traffic				Trafic d'entier parcours
Transits	5,156	5,047	+ 2.1	Transits
Total cargo	36,828,055	34,918,399	+ 5.4	Total des cargaisons

*Includes both Canadian and U.S. revenues.

**Tolls suspended on Welland Section, July 18, 1962.

*Comprend la part des péages revenant au Canada et aux États-Unis.

**Péages sur le canal de Welland suspendus le 18 juillet 1962.

PRESIDENT'S MESSAGE

March 31, 1966.

The Honourable J. W. Pickersgill,
Minister of Transport,
Ottawa.

Dear Sir:

The St. Lawrence Seaway Authority submits the annual report for the year 1965.

This report covers the seventh season of operation of the Seaway between Montreal and Lake Erie and includes the operation of all canals administered by the Authority.

The strong growth trend that has characterized the St. Lawrence Seaway's development continued during the past year and produced new records in traffic and revenues.

Cargo tonnage surpassed records established in 1964, rising by more than 10 per cent in the Montreal-Lake Ontario Section and by 4 per cent in the Welland Section. Vessel transits on both parts of the Seaway recorded an increase over the previous year with the larger increase—8 per cent—registered on the Montreal-Lake Ontario Section.

Toll revenues on the Montreal-Lake Ontario Section, operated jointly with the United States Saint Lawrence Seaway Development Corporation, reached a new high of almost \$22 million during 1965. The Authority's share of these tolls approached \$15.5 million, an increase of almost two million dollars over the 1964 total. The collection of tolls on the Welland Section, which is operated entirely by Canada, was suspended on July 18, 1962.

Profits from operations on the Montreal-Lake Ontario Section amounted to approximately \$12.3 million but interest charges on outstanding loans and provision for replacement of capital assets, produced a net loss of \$3.8 million. The costs of operation and maintenance on the Welland Section amounted to just over 8 million dollars.

In general the financial condition of the St. Lawrence Seaway Authority has improved and due to adjustments in the financing of the Welland Section capital improvements and operating deficits which occurred during the year, the position of the Authority with regard to its obligations to the Government of Canada has been clarified.

The eastern end of the Lachine Canal was closed permanently on February 1, 1965, to provide for the extension of University Street. Cargo traffic in the canal continued to decrease during the year, falling below the 500,000 ton mark; operating costs amounted to slightly more than \$1,000,000. Tonnage through the Sault Ste. Marie Canal in 1965 exceeded one million tons, with operating costs of approximately \$500,000. The Cornwall Canal in the same period recorded less than 120,000 tons, with operating costs of more than \$640,000.

The 1965 season of navigation on the Montreal-Lake Ontario Section closed on December 17th, the latest date on record since the opening of the Seaway in 1959; the Welland Section closed on December 16th to meet construction scheduling commitments.

A new Western Region headquarters building was completed in 1965 and opened officially on September 23. Construction of a new headquarters for the Eastern Region was started in 1965, with completion expected by early 1966.

As a result of changes in operational procedures and certain construction improvements, the efficiency of the Welland Section increased substantially in 1965. This performance was marred in November by high winds and fog which, while unrelated to canal capacity, did cause serious congestion. Additional improvements are underway that should result in a further increase in the Section's efficiency.

The Canadian and American Seaway administrations are required to report to their respective governments by July 1, 1966, as to the sufficiency of the present tariff of tolls in meeting statutory financial requirements and to recommend a level of tolls related as realistically as possible to these requirements.

In preparation for this review the Authority retained the services of consultant economists to study and report on the future growth potential of Seaway cargo traffic. A similar study was commissioned by the United States Saint Lawrence Seaway Development Corporation. Both these studies indicate that, with the continued growth of the North American economy, substantial increases in traffic can be anticipated over the next several decades. In order to meet this anticipated growth in traffic on the Seaway, in addition to the approved twinning and modernization program on the Welland Section, the government is considering the construction of a new channel to by-pass the City of Welland. This proposed new alignment would eliminate obstructions to navigation and reduce vessel transit times. The Authority is also actively studying the implications of traffic growth on the Montreal-Lake Ontario Section of the Seaway in relation to present facilities. To make provision for possible expansion, additional property—adjacent to the Beauharnois Locks at Melocheville, Quebec—was expropriated in December 1965.

Mr. R. J. Rankin, President of the Authority between 1960 and 1965, and formerly Vice-Chairman of the National Harbours Board, retired in July. During his five years as President, Mr. Rankin made an outstanding contribution to the development of the organization of the Authority; he will be greatly missed.

Respectfully



Pierre Camu,
President.

FINANCIAL REVIEW

SOMMAIRE FINANCIER

	1965	1964	Variation	
MONTREAL-LAKE ONTARIO SECTION				SECTION DE MONTRÉAL AU LAC ONTARIO
Income	\$16,050,504	\$14,108,612	+ \$1,941,892	Recettes
Operating expenses and replacement provision	4,395,063	3,743,678	+ 651,385	Dépenses d'exploitation et montant prévu pour le remplacement
Net operating income	11,655,441	10,364,934	+ 1,290,507	Recettes nettes d'exploitation
Deduct interest on loans	15,752,593	15,444,825	+ 307,768	Moins les intérêts sur les emprunts
Net loss for the year	<u>\$(4,097,152)</u>	<u>\$(5,079,891)</u>	<u>— \$ 982,739</u>	Perte nette de l'année
WELLAND SECTION				SECTION DE WELLAND
Income (from rents, wharfage, etc.)	\$ 797,677	\$ 941,495	— \$ 143,818	Recettes (loyers, droits d'accostage et de terre-plein, etc.)
Operating expenses and replacement provision	8,900,925	6,724,044	+ 2,176,881	Dépenses d'exploitation et montant prévu pour le remplacement
Net operating loss	(8,103,248)	(5,782,549)	+ 2,320,699	Perte nette d'exploitation
Add interest on loans	71,325	2,619,402	— 2,548,077	Plus les intérêts sur les emprunts
Net loss for the year	<u>\$(8,174,573)</u>	<u>\$(8,401,951)</u>	<u>— \$ 227,378</u>	Perte nette de l'année
COMBINED RESULTS				SECTIONS COMBINÉES
Income	\$16,848,181	\$15,050,107	+ \$1,798,074	Recettes
Operating expenses and replacement provision	13,295,988	10,467,722	+ 2,828,266	Dépenses d'exploitation et montant prévu pour le remplacement
Net operating income	3,552,193	4,582,385	— 1,030,192	Recettes nettes d'exploitation
Deduct interest on loans	15,823,918	18,064,227	— 2,240,309	Moins les intérêts sur les emprunts
Net loss for the year	<u>\$(12,271,725)</u>	<u>\$(13,481,842)</u>	<u>— \$1,210,117</u>	Perte nette de l'année

MESSAGE DU PRÉSIDENT

Le 31 mars 1966.

L'Honorable J. W. Pickersgill
Ministre des Transports
Ottawa

Monsieur le Ministre,

L'administration de la voie maritime du Saint-Laurent présente son rapport annuel pour l'année 1965.

En un mot, disons que la septième saison de navigation sur la voie maritime qui s'étend de Montréal au lac Érié a brisé tous les records de trafic.

En effet, le tonnage des cargaisons a augmenté de plus de 10 pour cent dans la section de Montréal au lac Ontario, et de 4 pour cent dans la section de Welland. Le nombre des navires qui ont emprunté les deux parties de la voie maritime s'est accru par rapport à l'année précédente, avec une augmentation de 8 pour cent du trafic transitant dans la section de Montréal au lac Ontario.

Les péages perçus dans la section de Montréal au lac Ontario ont atteint en 1965 un nouveau sommet de près de \$22,000,000. La part de l'Administration s'est élevée à près de \$15,500,000, soit une hausse de près de 2 millions sur le montant perçu en 1964. Les péages dans la section de Welland sont suspendus depuis le 18 juillet 1962.

Les bénéfices d'exploitation réalisés dans la section de Montréal au lac Ontario s'élèvent à près de \$12,300,000; mais à cause des intérêts sur emprunts et des sommes affectées au remplacement des immobilisations, l'année se solde par une perte nette de \$3,800,000. Le coût annuel de l'exploitation et de l'entretien de la section de Welland atteint un peu plus de \$8,000,000.

On a constaté en général que la situation financière de l'Administration s'est améliorée. Grâce à des arrangements intervenus pour financer les grands travaux en cours et couvrir les déficits d'exploitation en 1965 dans la section du canal de Welland, on a clarifié la position financière de l'Administration relativement à ses obligations envers l'État.

La section est du canal de Lachine a été définitivement fermée à la navigation le 1^{er} février 1965 afin de permettre le prolongement de la rue University. Le trafic des cargaisons transportées dans le canal a continué à décroître au cours de l'année, alors qu'il s'est établi à un volume inférieur à 500,000 tonnes; par ailleurs, les frais d'exploitation se sont élevés à un peu plus de \$1,000,000. Le volume des cargaisons transportées dans le canal de Sault-Sainte-Marie au cours de la saison 1965 a excédé 1,000,000 de tonnes, alors que les frais d'exploitation ont été de l'ordre de \$500,000 environ. Durant cette même période, le volume des cargaisons transportées dans le canal de Cornwall était inférieur à 120,000 tonnes, alors que les frais d'exploitation s'élevaient à plus de \$640,000. En 1965, la navigation dans la section de Montréal au lac Ontario s'est terminée le 17 décembre, soit la date de clôture la plus tardive depuis l'ouverture de la voie maritime en 1959. La navigation dans le canal de Welland s'est terminée le 16 décembre afin de permettre la reprise des grands travaux de construction.

Un nouvel immeuble abritant l'administration de la région de l'Ouest a été inauguré le 23 septembre 1965. Par ailleurs, la construction d'un nouvel immeuble dans la région de l'Est a été commencée en 1965 et sera complétée tôt en 1966.

Par suite des changements intervenus dans les procédés d'exploitation et certaines améliorations apportées à ses ouvrages, le rendement de la section de Welland s'est accru d'une manière notable en 1965. Toutefois, ce nouveau rendement a en quelque sorte été amoindri par de fréquents brouillards et des grands vents survenus durant le mois de novembre, occasionnant des retards importants à la navigation. D'autres améliorations sont en cours en vue d'accroître davantage le trafic de cette section.

Les organismes canadien et américain responsables de l'administration de la voie maritime du Saint-Laurent doivent présenter leur rapport final à leurs gouvernements respectifs, au plus tard le 1^{er} juillet 1966, afin de déterminer si les péages actuels sont suffisants pour rencontrer les obligations financières et, s'il y a lieu, recommander de nouveaux péages susceptibles de satisfaire ces obligations. L'Administration a retenu à cette fin les services d'économistes qui ont fait une étude du trafic potentiel des navires et des cargaisons transportées dans la voie maritime. Une étude similaire a été effectuée à la demande de la Saint Lawrence Seaway Development Corporation. Il ressort de ces études, compte tenu du développement continu de l'économie nord-américaine, que l'on doit anticiper une augmentation constante du trafic au cours des prochaines décennies.

Pour parer aux exigences nouvelles de l'accroissement du trafic, le gouvernement étudie en ce moment, en outre du projet en cours sur le jumelage et la modernisation de la section de Welland, un projet de construction d'un chenal devant contourner la ville de Welland. La réalisation de ce projet fera disparaître les obstacles actuels à la navigation et réduira le temps mis par les navires à traverser le canal. De son côté, l'Administration étudie quelles seront les conséquences de cet accroissement de trafic et ses effets dans la section de Montréal au lac Ontario. C'est pourquoi de nouveaux terrains adjacents aux écluses de Beauharnois et situés dans la municipalité de Melocheville, au Québec, ont été expropriés en décembre 1965.

Nous rendons hommage à Monsieur R. J. Rankin, président de l'Administration de la voie maritime du Saint-Laurent de 1960 à 1965, qui a pris sa retraite en juillet 1965. Monsieur Rankin était un ancien vice-président du Conseil des ports nationaux. Nous n'oublierons pas les services éminents qu'il a rendus à l'Administration durant ces cinq dernières années.

Respectueusement,



Le Président,
Pierre Camu

OPERATIONS



1

During 1965, on the Montreal-Lake Ontario Section, there were 7,330 transits compared to 6,779 in 1964, an increase of 8.1 per cent. The number of accidents involving vessels on this section during 1965 was 24 compared to 30 in 1964, or a reduction of 20 per cent. In the Welland Section in 1965, there were 8,384 transits, compared to 8,304 in 1964. The number of accidents involving vessels in this section was 22 in 1965 compared to 56 in 1964, or a reduction of 60 per cent.

Transportation consultants, retained in 1964 to relieve congestion on the Welland Section, continued their efforts during 1965. A number of changes in operational procedures were adopted on their recommendation. In 1965, particular emphasis was placed on the development of a modern traffic control system.

A series of experiments was planned for the end of the navigation season in the Eastern Region. These tests were intended to assess different methods of preventing ice formation in channels and locks. However, unusually mild weather permitted the Montreal-Lake Ontario Section to continue in operation until December 17. Considerable data that should prove valuable in future years was secured through the various experiments although severe icing conditions did not occur before the close of navigation.

Operations on the Seaway have proved to be of great interest to the public and, accordingly, observation areas have been provided at various locations. Improvements to these facilities are planned, as well as additional facilities at other locations.



2

1 CONTROL TOWER, CÔTE STE. CATHERINE LOCK, MONTREAL-LAKE ONTARIO SECTION.
TOUR DE CONTRÔLE À L'ÉCLUSE DE CÔTE-SAINTÉ-CATHERINE, SECTION DE MONTRÉAL AU LAC ONTARIO.

2 A LAKER EXITS CÔTE STE. CATHERINE LOCK DOWNBOUND, MONTREAL-LAKE ONTARIO SECTION.
NAVIRE DES LACS SE DIRIGEANT VERS L'AVAL À L'ÉCLUSE DE CÔTE-SAINTÉ-CATHERINE, SECTION DE MONTRÉAL AU LAC ONTARIO.

EXPLOITATION

Dans la section de Montréal au lac Ontario, il y a eu 7,330 transits en 1965 contre 6,779 en 1964, soit une augmentation de 8.1 p. 100. Le nombre d'accidents mettant en cause des navires a été de 24 contre 30 en 1964, soit une diminution de 20 p. 100. Dans la section de Welland, il y a eu 8,384 transits en 1965 contre 8,304 en 1964. Le nombre d'accidents mettant en cause des navires a été de 22 contre 56 en 1964, soit une baisse de 60 p. 100.

Les spécialistes en matière de transport dont les services avaient été retenus en 1964 en vue de diminuer l'encombrement dans la section de Welland ont poursuivi leurs travaux en 1965. Sur leur recommandation, un certain nombre de changements ont été apportés aux méthodes d'exploitation. En 1965, on a surtout étudié la possibilité d'installer un système moderne de contrôle du trafic. Dans la région de l'Est, on avait projeté d'effectuer à la fin de la saison de navigation une série d'expériences visant à évaluer les différentes méthodes de prévention de la formation de la glace dans les chenaux et les écluses. Mais le temps exceptionnellement doux a permis à la section de Montréal au lac Ontario de demeurer ouverte jusqu'au 17 décembre. Grâce à ces expériences, on a recueilli une foule de données qui seront d'une grande utilité dans les années à venir, bien que les couches épaisses de glace n'aient pas commencé à se former avant la clôture de la navigation.

On a constaté que le public s'intéressait vivement à l'activité de la voie maritime et c'est pourquoi on a installé des postes d'observation à divers endroits. On projette d'améliorer ces installations et d'en aménager d'autres ailleurs.

3



3 A JAPANESE VESSEL MOVES DOWNBOUND THROUGH ST. LAMBERT LOCK
NAVIRE JAPONAIS SE DIRIGEANT VERS L'AVANT À L'ÉCLUSE DE SAINT-LAMBERT.

4 OPERATIONS CONTROL CENTRE, WELLAND SECTION.
CENTRE DE CONTRÔLE DES OPÉRATIONS, SECTION DE WELLAND.

4



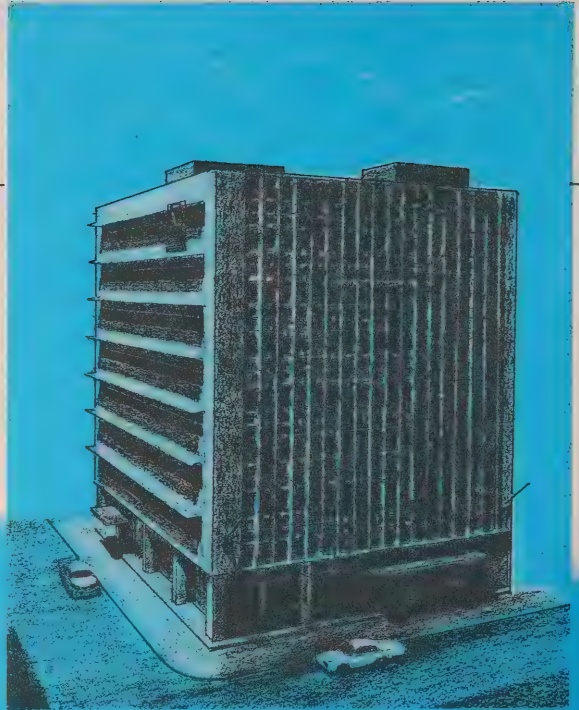
ORGANIZATION

Dr. Pierre Camu, vice president of the Authority since 1960, was appointed president on August 1, 1965, following the retirement of Mr. R. J. Rankin. Mr. Peter E. R. Malcolm, member of the Authority, was appointed vice president, and Mr. Delmer E. Taylor was appointed member.

Ottawa



Cornwall



As of December 31, 1965, there were 1,631 employees; of these 151 were engaged on construction improvements to the Welland Section.

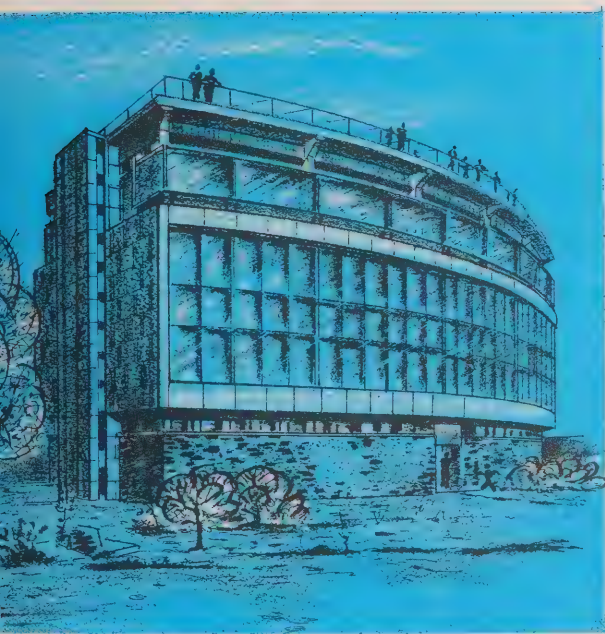
Three collective agreements with The Canadian Brotherhood of Railway, Transport and General Workers, representing field, headquarters and modernization project employees, expired on December 31, 1965. At the year's end, collective bargaining negotiations were in progress.

During 1965 a Contractors' Association was formed to represent all contractors who will work on the Welland modernization project. This association negotiated a master labour agreement with a council of unions to represent employees of all trades who will be working for the contractors on the project. This has been of material benefit in providing stable conditions for the performance of the work on the project.



St. Catharines

ORGANISATION



Saint Lambert

M. Pierre Camu, vice-président de l'Administration depuis 1960, a été nommé président le 1^{er} août 1965, à la suite de la retraite de M. R. J. Rankin. M. Peter E. R. Malcolm, membre de l'Administration, a été nommé vice-président, et M. Delmer E. Taylor a été nommé membre. Au 31 décembre 1965, l'Administration comptait 1,631 employés dont 151 étaient occupés à l'amélioration de la section de Welland.



Montréal

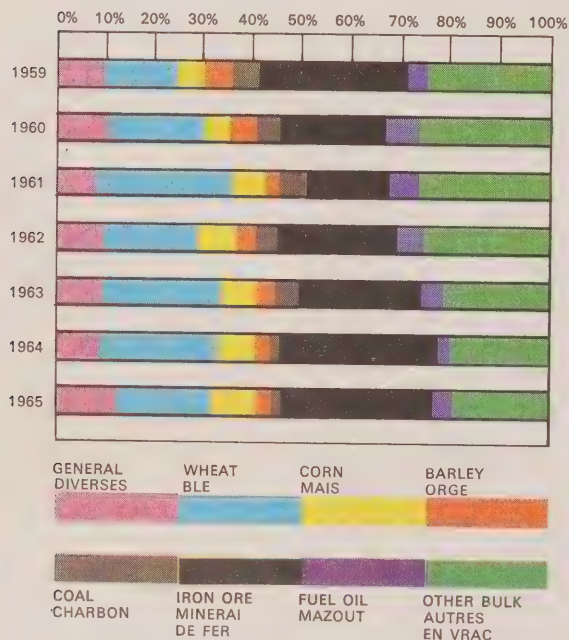
Trois conventions collectives avec la Fraternité canadienne des cheminots, employés des transports et autres ouvriers, qui représente les employés régionaux, les employés du bureau central et les employés affectés aux travaux de modernisation, ont expiré le 31 décembre 1965. A la fin de l'année, des pourparlers en vue de la signature de nouvelles conventions collectives étaient en cours.

En 1965, tous les entrepreneurs intéressés aux travaux de modernisation du canal de Welland se sont groupés en une association. Celle-ci a négocié une convention type de travail avec un conseil de syndicats afin de représenter les employés de tous les métiers qui seront au service des entrepreneurs chargés des travaux. Cette convention a permis d'établir des conditions stables pour l'exécution des divers travaux.

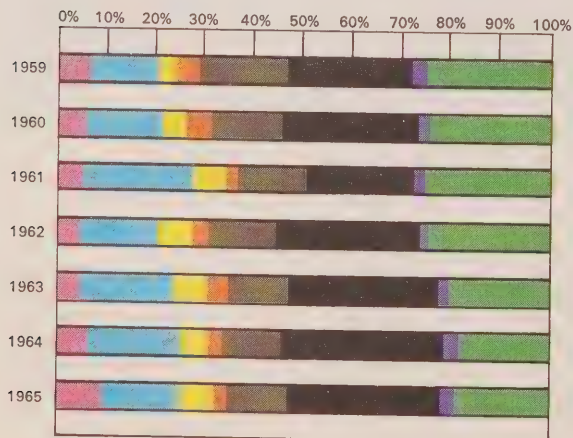
STATISTICS

MAIN COMMODITY TRAFFIC TRAFFIC DES DENRÉES PRINCIPALES

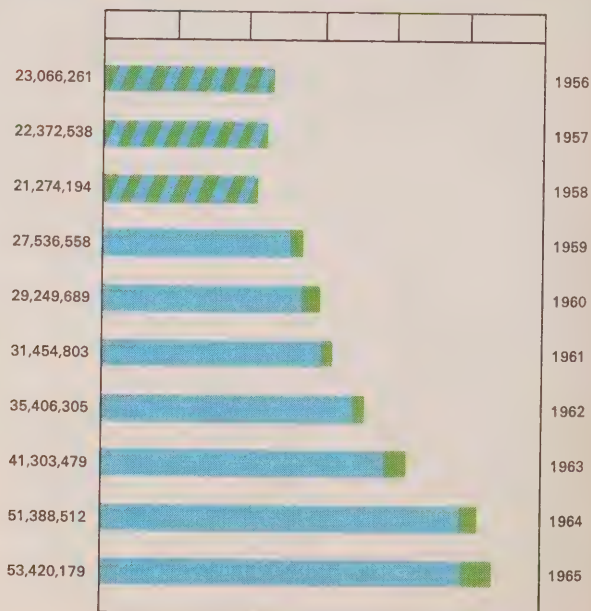
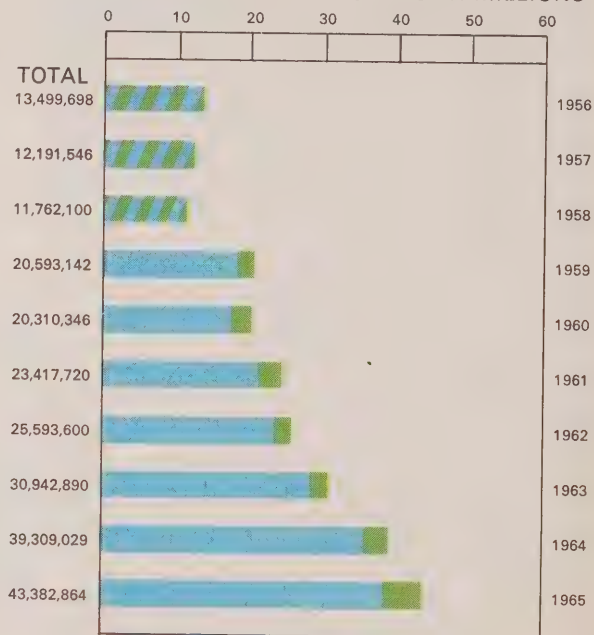
MONTREAL—L. ONTARIO



WELLAND



TONS IN MILLIONS TONNES EN MILLIONS



STATISTIQUES

STATISTICAL SUMMARY (figures in millions)

SOMMAIRE STATISTIQUE (montants en millions)

MONTRÉAL- L. ONTARIO	1959*	1960	1961	1962	1963	1964	1965
Cargo—tons							
Cargaisons—tonnes	20.6	20.3	23.4	25.6	30.9	39.3	43.4
Revenue							
Recettes	\$ 7.4	\$ 7.3	\$ 8.2	\$ 9.2	\$ 11.2	\$ 14.2	\$ 16.1
Expenses							
Frais	\$ 1.8	\$ 2.5	\$ 2.8	\$ 3.4	\$ 3.6	\$ 3.8	\$ 4.4
Net Operating Profit							
Profit net d'exploitation	\$ 5.6	\$ 4.8	\$ 5.4	\$ 5.8	\$ 7.6	\$ 10.4	\$ 11.7
Interest							
Intérêt	\$ 7.4	\$ 11.5	\$ 12.7	\$ 13.8	\$ 14.7	\$ 15.5	\$ 15.3
Loss for Year							
Perte de l'année	\$ 1.8	\$ 6.7	\$ 7.3	\$ 8.0	\$ 7.1	\$ 5.1	\$ 4.1†
Debt at Year end‡							
Dettes à la fin de l'année‡	\$283.4	\$300.6	\$321.2	\$337.1	\$356.7	\$362.8	\$370.8

‡Debt equals borrowing plus deferred interest.

‡La dette égale les emprunts plus les intérêts différés.

*Operating expenses and interest are for nine months.

*Frais d'exploitation et intérêts pour neuf mois.

†Excludes \$2.2 million provision for replacement adjustment for prior years.

†Exclu une réserve de \$2.2 millions au titre de redressement du poste "remplacement" pour les années précédentes.

WELLAND

Cargo—tons							
Cargaisons—tonnes	27.5	29.2	31.5	35.4	41.2	51.4	53.4
Revenue‡							
Recettes‡	\$ 1.8	\$ 2.0	\$ 2.2	\$ 1.4	\$ 0.8	\$ 0.9	\$ 0.8
Expenses							
Frais	\$ 2.4	\$ 3.7	\$ 4.6	\$ 4.4	\$ 4.9	\$ 6.3	\$ 8.9
Net Operating Loss							
Perte net d'exploitation	\$ 0.6	\$ 1.7	\$ 2.4	\$ 3.0	\$ 4.1	\$ 5.4	\$ 8.1
Interest							
Intérêt	\$ 0.7	\$ 1.2	\$ 1.5	\$ 1.8	\$ 2.1	\$ 2.6	\$ 0.1
Loss for the Year							
Perte de l'année	\$ 1.3	\$ 2.9	\$ 3.9	\$ 4.8	\$ 6.2	\$ 8.0	\$ 8.2
Debt at Year end							
Perte à la fin de l'année	\$ 25.3	\$ 29.7	\$ 32.4	\$ 33.0	\$ 40.0	\$ 43.6	\$ 53.6

‡Welland tolls were suspended on July 18th, 1962.

‡Les péages dans le canal de Welland ont été suspendus le 18 juillet 1962.

TRAFFIC



1



2



3

Traffic through the Seaway reached an all-time high in 1965, a total of 43,382,864 tons of cargo on the Montreal-Lake Ontario Section, and 53,420,179 tons on the Welland Section.

On the Montreal-Lake Ontario Section, vessels engaged in inland shipping carried cargoes of 29.6 million tons, an increase of 2.4% over 1964, and this represented 68.3% of all traffic through this section.

On the Welland Section, these vessels carried 41.9 million tons, a decrease of approximately 2% from 1964, and this represented 78.5% of the total traffic on this section.

On the Montreal-Lake Ontario Section, ocean-going vessels carried cargoes of 13.7 million tons, an increase of 32.8% over 1964, and this represented 31.7% of all traffic through this section.

On the Welland Section, these vessels accounted for 11.5 million tons, an increase of 32.1% over 1964, and this represented 21.5% of the total traffic on this section.

1 UNLOADING GENERAL CARGO IN THE PORT OF TORONTO.
DÉCHARGEMENT DE MARCHANDISES DIVERSES AU PORT DE TORONTO.

2 TWO VESSELS MEET IN THE LOCK 7 AREA, WELLAND CANAL.
DEUX NAVIRES SE CROISANT PRÈS DE L'ÉCLUSE N° 7, CANAL DE WELLAND.

3 A LAKER PASSES AN OCEAN VESSEL NORTH OF THE GUARD GATE, WELLAND CANAL.
NAVIRE DES LACS DOUBLANT UN NAVIRE OCÉANIQUE DANS LE CANAL DE WELLAND.

Le trafic dans la voie maritime a atteint en 1965 un sommet sans précédent: 43,382,864 tonnes de cargaisons dans la section de Montréal au lac Ontario, 53,420,179 tonnes dans la section de Welland. Dans la section de Montréal au lac Ontario, les navires affectés à la navigation intérieure ont transporté 29,600,000 tonnes de cargaisons, soit une augmentation de 2.4 p. 100 par rapport à 1964. Ce chiffre représente 68.3 p. 100 de l'ensemble du trafic dans cette section. Dans la section de Welland, ces navires ont transporté 41,900,000 tonnes, soit une diminution d'environ 2 p. 100 par rapport à 1964. Ce chiffre représente 78.5 p. 100 du volume total du trafic dans cette section. Dans la section de Montréal au lac Ontario, les navires océaniques ont transporté 13,700,000 tonnes de cargaisons, soit une augmentation de 32.8 p. 100 comparativement à 1964. Ce chiffre représente 31.7 p. 100 de tout le trafic dans cette section. Dans la section de Welland, ces navires ont transporté 11,500,000 tonnes de cargaisons, soit une augmentation de 32.1 p. 100 par rapport à 1964. Ce chiffre représente 21.5 p. 100 du volume total du trafic dans cette section.



- 4 AN OCEAN VESSEL TRANSITS LOCK 2 OF THE WELLAND CANAL.
NAVIRE Océanique TRAVERSANT L'ÉCLUSE N° 2 DU CANAL DE WELLAND.
- 5 A LARGE LAKER MOVES DOWNBOUND THROUGH IROQUOIS LOCK.
GRAND NAVIRE DES LACS SE DIRIGEANT VERS L'AVAL À L'ÉCLUSE D'IROQUOIS.
- 6 ST. LAMBERT LOCK, NEAR MONTREAL.
ÉCLUSE DE SAINT-LAMBERT, PRÈS DE MONTRÉAL.
- 7 A 730 FOOT LAKER—ONE OF THE LARGEST TO USE THE SEAWAY—APPROACHES LOCK 3, WELLAND CANAL.
NAVIRE DE 730 PIEDS—L'UN DES PLUS LONGS À EMPRUNTER LA VOIE MARITIME—S'APPROCHANT DE L'ÉCLUSE N° 3 DU CANAL DE WELLAND.

COMMODITY TRAFFIC



1



2



3

Bulk cargoes, on the Montreal-Lake Ontario Section, amounted to 37.8 million tons, an increase of 6.1 per cent over 1964, and this represented 87.1 per cent of all cargoes through this section.

General cargoes, the balance of the traffic for this section, amounted to 5.6 million tons in 1965, an increase of 51.7 per cent over 1964.

On the Welland Section, bulk cargoes amounted to 48.7 million tons, approximately the same as in 1964, and this represented 91.2 per cent of the total traffic for this section.

General cargoes, the balance of the traffic for this section, amounted to 4.7 million tons in 1965, an increase of 48.6 per cent over 1964.

Iron ore was the most important single product moved through the Montreal-Lake Ontario Section, amounting to 12.8 million tons, an increase of 5.1 per cent over 1964.

Wheat was second in volume, amounting to 8.6 million tons, a decrease of 5.9 per cent from 1964. Corn, manufactured iron and steel, fuel oil and soybeans were other commodities accounting for a significant portion of the total cargoes, and all showed increases in 1965.

Iron ore was also the most important single product moving through the Welland Section, amounting to 16.1 million tons, a decrease of 4.1 per cent from 1964. Wheat was second in volume, amounting to 8.8 million tons, a decrease of 10.2 per cent from 1964. Coal followed with 7.2 million tons, an increase of 14.2 per cent over 1964. Corn, manufactured iron and steel and soybeans were other volume commodities, all of which showed increases in 1965.

1 LOADING GENERAL CARGO FOR OVERSEAS.

CHARGEMENT DE MARCHANDISES DIVERSES À DESTINATION D'OUTRE-MER.

2 A SELF-UNLOADING LAKER DISCHARGES A SHIPMENT OF COAL.

BATEAU DÉCHARGEANT DU CHARBON PAR SES PROPRES MOYENS.

3 A LAKER PREPARES TO UNLOAD IRON ORE.

MINÉRIER S'APPRÊTANT À DÉCHARGER SA CARGAISON.

TRANSPORT DES DENRÉES

Dans la section de Montréal au lac Ontario, le volume des cargaisons en vrac a atteint 37,800,000 tonnes, soit une augmentation de 6.1 p. 100 par rapport à 1964. Ce chiffre représente 87.1 p. 100 de toutes les marchandises transportées dans cette section.

Le volume des marchandises diverses, qui a constitué le reste du trafic dans cette section, s'est élevé à 5,600,000 tonnes en 1965, soit une augmentation de 51.7 p. 100 par rapport à 1964.

Dans la section de Welland, le volume des cargaisons en vrac s'est établi à 48,700,000 tonnes, soit à peu près le même qu'en 1964. Ce chiffre représente 91.2 p. 100 de tout le trafic dans cette section.

Les marchandises diverses, qui ont constitué le reste du trafic dans cette section, ont atteint un volume de 4,700,000 tonnes en 1965, soit une augmentation de 48.6 p. 100 par rapport à 1964.

Le minerai de fer a été la principale denrée transportée dans la section de Montréal au lac Ontario; son volume s'est élevé à 12,800,000 tonnes, soit une augmentation de 5.1 p. 100 par rapport à 1964. Le blé occupe le deuxième rang avec 8,600,000 tonnes, soit une diminution de 5.9 p. 100 par rapport à 1964. Le maïs, l'acier et le fer manufacturé, le mazout et la fève de soya ont constitué une partie importante du volume total, et dans tous les cas il y a eu augmentation en 1965.

Le minerai de fer a également été la principale denrée transportée dans la section de Welland; son volume a atteint 16,100,000 tonnes, soit une diminution de 4.1 p. 100 par rapport à 1964. Le blé vient en second lieu avec 8,800,000 tonnes, soit une diminution de 10.2 p. 100 par rapport à 1964. Vient ensuite le charbon avec 7,200,000 tonnes, soit une augmentation de 14.2 p. 100 par rapport à 1964. Le maïs, le fer et l'acier manufacturé et la fève de soya représentent une proportion importante du trafic et toutes ces denrées ont accusé une augmentation en 1965.



4



5



6

4 LOADING PACKAGE FREIGHT.

CHARGEMENT DE MARCHANDISES EN COLIS.

5 AN OCEAN VESSEL LOADS WHEAT FOR OVERSEAS.

CHARGEMENT DE BLÉ À BORD D'UN NAVIRE Océanique.

6 A SHIPMENT OF GENERAL CARGO BEING UNLOADED.

DÉCHARGEMENT D'UNE CARGAISON DE MARCHANDISES DIVERSES.

CONSTRUCTION

The Welland Canal modernization project continued in 1965 with the awarding of 41 additional contracts, totalling more than \$20,000,000 and involving as many as 1,200 contractors' employees.

The major portion of construction activity in the Welland Section must be carried out when the canal is in an unwatered condition during the non-navigation season, which is only about a three-month period. The difficult scheduling of this winter work is further complicated by the restricted areas in which most of the work must be done. Any disruption of the time-table might delay the opening of the navigation season.

In addition to the contracts awarded by the Authority, the Department of Highways of Ontario, under a joint financing agreement with the Authority, is constructing two vehicular tunnels under the Welland Canal—one at Carlton Street in St. Catharines, the other at Thorold—with completion of both scheduled for 1968.



1 THOROLD HIGHWAY TUNNEL CONSTRUCTION, WELLAND CANAL.
CONSTRUCTION DU TUNNEL ROUTIER DE THOROLD, CANAL DE WELLAND.

2 HYDRAULIC IMPROVEMENTS BETWEEN LOCKS 6 AND 7, WELLAND CANAL.
EXÉCUTION DE TRAVAUX HYDRAULIQUES ENTRE LES ÉCLUSES N^{os} 6 ET 7
DU CANAL DE WELLAND.



CONSTRUCTION



3

Le programme de modernisation des installations du canal de Welland s'est poursuivi en 1965 par l'adjudication de 41 autres contrats qui représentent une valeur globale de plus de \$20 millions et qui ont nécessité l'embauchage d'environ 1,200 employés par les entrepreneurs.

La majeure partie des travaux de construction dans la section de Welland doit être effectuée alors que le canal est à sec pendant la saison morte de navigation, dont la durée est d'environ trois mois. La difficulté inhérente à l'établissement du programme des travaux d'hiver se complique davantage par l'exiguïté des secteurs dans lesquels la plupart de ces travaux doivent s'effectuer. Tout dérangement dans l'horaire est de nature à retarder l'ouverture de la saison de navigation.

En plus des contrats adjugés par l'Administration, le ministère de la Voirie de l'Ontario construit, en vertu d'une entente financière passée avec l'Administration, deux tunnels routiers sous le canal de Welland, dont un à la rue Carlton à St. Catharines, et l'autre à Thorold. La construction de ces deux tunnels est censée être achevée en 1968.



4

3 CONSTRUCTION OF NEW APPROACH WALL ABOVE LOCK 2, WELLAND CANAL.
CONSTRUCTION D'UN NOUVEAU MUR D'APPROCHE EN AMONT DE L'ÉCLUSE N° 2, CANAL DE WELLAND.

4 MODIFICATIONS TO HYDRAULICS LOCK 7, WELLAND CANAL.
MODIFICATION DES INSTALLATIONS HYDRAULIQUES À L'ÉCLUSE N° 7 DU CANAL DE WELLAND.

5 WINTER CONSTRUCTION, LOCK 7, WELLAND SECTION.
EXÉCUTION DE TRAVAUX DE CONSTRUCTION, EN HIVER, ÉCLUSE N° 7, SECTION DE WELLAND.

6 MAJOR MODIFICATIONS, UPPER END OF LOCK 7, WELLAND CANAL.
EXÉCUTION DE MODIFICATIONS PRÈS DE L'EXTREMITÉ AMONT DE L'ÉCLUSE N° 7, CANAL DE WELLAND.

5



6



FINANCE

The financial statements of the Authority as at December 31, 1965, and the Auditor General's report thereon will be found on pages 20 to 37 of this Report. The Authority's sources of funds and the purposes for which they have been used are tabulated hereunder:

(millions of \$)					
	Montreal-Lake Ontario Section		Welland Section		Total
	Change in 1965	1 August, 1954 to 31 Dec., 1965	Change in 1965	1 April, 1959 to 31 Dec., 1965	
Net Receipts of Funds					
From Government of Canada					
Loans	\$ —	\$326.7	\$ 46.5	\$ 74.3	\$401.0
Temporary loans	—	—	6.8	6.8	6.8
Deferment of cash interest payments	—	—	1.0	34.0	34.0
Parliamentary appropriation;— 1959-64 deficit	—	—	27.1	27.1	27.1
From operations					
Profit before interest	11.7	49.1	—	—	49.1
Replacement provision	.9	5.9	—	—	5.9
Miscellaneous	—	1.1	—	.3	1.4
Total Net Receipts	12.6	382.8	81.4	142.5	525.3
Funds Expended For					
Capital assets—gross additions	.9	328.9	15.4	56.1	385.0
Repayment of loans	—	—	21.8	21.8	21.8
Repayment of advances (deferred interest)	—	—	33.0	33.0	33.0
Loss before interest	—	—	8.1	25.2	25.2
Operating interest	7.8	47.2	10.0	10.0	57.2
Total Net Expenditures	8.7	376.1	88.3	146.1	522.2
Funds Retained (working capital)	\$ 3.9	\$ 6.7	\$ (6.9)	\$ (3.6)	\$ 3.1

For the Montreal-Lake Ontario Section, toll revenues increased by 14.3% from \$13.5 million to \$15.5 million. The greater part of this \$2 million increase in revenue is attributable to a 51.7% jump in general cargo tonnage. Although there were no changes in tolls during 1965, average revenue per cargo ton was 35.7¢ compared with 34.5¢ in 1964. This increase is attributable to the change in "cargo mix", general cargo, which bears a higher toll, representing 12.9% of total cargo tonnage instead of 9.4% as in 1964.

Total expenses of the Section, other than loan interest and replacement provision, amounted to \$3.5 million (8.1¢ per cargo ton) in 1965 compared with \$3.3 million (8.4¢ per cargo ton) in 1964.

At \$12.5 million the 1965 net operating income of the Montreal-Lake Ontario Section shows an increase of 15.8% over the 1964 figure of \$10.8 million. Interest charges, however, of \$15.8 million (1964—\$15.4 million) and provision for replacement of moveable assets of \$0.9 million (1964—\$0.5 million) resulted in there being a loss of \$4.1 million for 1965 compared with \$5.1 million for 1964.

At the year end the accumulated deficit of the Montreal-Lake Ontario Section amounted to \$42.2 million. Including loans and deferred interest the Authority's debt relating to this portion of the Seaway amounts to \$370.8 million. The net costs (before interest) of the toll free Welland Section in 1965 were \$8.1 million compared with \$5.4 million in 1964. The substantial increase of \$2.7 million is largely due to the extensive maintenance being carried out in conjunction with the modernization programme and to the cost of the traffic survey undertaken to relieve shipping congestion.

As noted in the Auditor General's report, due to the trend of rising prices, provision for the replacement of machinery and equipment of the Montreal-Lake Ontario Section is now being made on the basis of estimated replacement costs. At December 31, 1965, the balance of the Reserve stands at \$5.8 million against replaceable assets having an acquisition cost of \$12.0 million and an estimated replacement cost of \$23 million.

Early in 1965 the Authority was reimbursed for the accumulated 1959-1964 deficit of the Welland Section, which amounted to \$27.1 million, by means of a Parliamentary appropriation. The funds so obtained, together with new interest free loans of \$35 million which were effected at the same time were used to repay interest bearing loans of \$21.8 million together with some \$40.3 million of the Authority's accumulated interest liability. At the same time, as a temporary measure to alleviate the interest burden on the Authority, arrangements were made that capital borrowings in connection with the Welland construction programme, and the temporary loans effected to finance the current operating deficit would be interest-free. It is anticipated that the 1965 operating deficit of \$8.2 million will be recovered out of a Parliamentary appropriation in Final Supplementary Estimates 1965-66 and at this time the temporary loans will be repaid.

In consequence of the refinancing of the Welland Section, and of payments out of the net operating income of the Montreal-Lake Ontario Section, the balance of the Authority's deferred interest liability was reduced during the year from \$79.0 million at the end of 1964 to \$45.1 million.

ACTIVITÉ FINANCIÈRE

Les états financiers de l'Administration au 31 décembre 1965 et le rapport de l'Auditeur général s'y rapportant sont donnés aux pages 20 à 37 du présent rapport. Les sources de recettes de l'Administration et l'affectation de ces recettes sont indiquées dans les tableaux ci-dessous:

	(en millions de dollars)					
	Section de Montréal au lac Ontario			Section de Welland		
	Changement en 1965	Du 1 ^{er} août 1954 en au 31 déc. 1965	Changement en 1965	Du 1 ^{er} avril 1959 en au 31 déc. 1965	Total au 31 déc. 1965	
Recettes nettes						
Du gouvernement du Canada						
Emprunts	\$ —	\$326.7	\$ 46.5	\$ 74.3	\$401.0	
Emprunts provisoires	—	—	6.8	6.8	6.8	
Paievements différés des intérêts, en espèces	—	—	1.0	34.0	34.0	
Crédit voté par le Parlement: Déficit de 1959-1964	—	—	27.1	27.1	27.1	
D'exploitation						
Bénéfice avant provision pour intérêts	11.7	49.1	—	—	49.1	
Réserve pour renouvellement	.9	5.9	—	—	5.9	
Divers	—	1.1	—	.3	1.4	
Recettes nettes totales	12.6	382.8	81.4	142.5	525.3	
Dépenses						
Immobilisations—additions brutes	.9	328.9	15.4	56.1	385.0	
Remboursement des emprunts	—	—	21.8	21.8	21.8	
Remboursement des avances (intérêts différés)	—	—	33.0	33.0	33.0	
Perte avant provision pour intérêts	—	—	8.1	25.2	25.2	
Intérêts d'exploitation	7.8	47.2	10.0	10.0	57.2	
Dépenses nettes totales	8.7	376.1	88.3	146.1	522.2	
Fonds retenus (capital de roulement)	\$ 3.9	\$ 6.7	\$ (6.9)	\$ (3.6)	\$ 3.1	

Dans la section de Montréal au lac Ontario, les recettes provenant des péages ont augmenté de 14.3 p. 100 pour passer de \$13,500,000 à \$15,500,000. La majeure partie de cette augmentation de 2 millions est attribuable au tonnage des marchandises diverses qui a enregistré une hausse de 51.8 p. 100.

Même si les péages n'ont pas été modifiés en 1965, le revenu moyen par tonneau d'affrètement a été de 35.7c. comparativement à 34.5c. en 1964. Cette augmentation tient au changement intervenu dans la composition des marchandises diverses, qui font l'objet de péages plus élevés et qui représentent 12.9 p. 100 du tonnage total au lieu de 9.4 p. 100 en 1964.

Les dépenses totales de la section, à l'exclusion des intérêts sur les emprunts et de la réserve pour renouvellement, ont atteint \$3,500,000 (8.1c. par tonne d'affrètement) en 1965 contre \$3,300,000 (8.4c. par tonneau d'affrètement) en 1964.

En 1965, le revenu net d'exploitation (\$12,500,000) de la section de Montréal au lac Ontario accuse une aug-

mentation de 15.8 p. 100 par rapport à 1964 (\$10,800,000). Toutefois, les intérêts (\$15,800,000 contre \$15,400,000 en 1964) et la réserve pour le renouvellement des biens meubles (\$900,000 contre \$500,000 en 1964) ont entraîné une perte de \$4,100,000 pour 1965 comparativement à \$5,100,000 pour 1964.

À la fin de l'année, le déficit accumulé de la section de Montréal au lac Ontario atteignait \$42,200,000. La dette de l'Administration à l'égard de cette partie de la Voie maritime s'élève à \$370,800,000, emprunts et intérêts différés compris.

Les frais nets (avant provision pour les intérêts) de la section de Welland non soumise au péage ont atteint \$8,100,000 en 1965 contre \$5,400,000 en 1964. La forte augmentation de \$2,700,000 est due dans une grande mesure aux travaux considérables d'entretien qui sont effectués dans le cadre du programme de modernisation et au montant que coûte le relevé sur le trafic entrepris en vue d'atténuer l'encombrement dans cette section.

Comme le signale le rapport de l'Auditeur général, en raison de la tendance des prix à la hausse, on établit maintenant la réserve pour le renouvellement des machines et du matériel de la section de Montréal au lac Ontario en se fondant sur le coût estimatif de remplacement. Au 31 décembre 1965, le solde de la réserve s'établit à \$5,800,000 en regard de biens renouvelables dont le coût d'acquisition est de \$12,000,000 et le coût estimatif de remplacement de \$23,000,000.

Au début de 1965, le Parlement a voté un crédit pour rembourser l'Administration du déficit accumulé par la section de Welland de 1959 à 1964, lequel atteignait \$27,100,000. Les fonds ainsi obtenus, de même que de nouveaux emprunts ne portant pas intérêts (\$35,000,000) qui ont été faits à la même occasion, ont servi à rembourser des emprunts productifs d'intérêts de \$21,800,000 ainsi que \$40,300,000 des intérêts accumulés dont était redevable l'Administration. En même temps, à titre de mesure temporaire visant à soulager le fardeau des intérêts de l'Administration, des ententes sont intervenues prévoyant que les emprunts de capital relatifs au programme de construction de Welland et que les emprunts temporaires effectués en vue de financer le déficit d'exploitation courant ne produiraient pas d'intérêts. On prévoit que le déficit d'exploitation de 1965 (\$8,200,000) sera récupéré grâce à un crédit voté par le Parlement dans le budget supplémentaire définitif de 1965-1966 et, à ce moment-là, les emprunts temporaires seront remboursés. Par suite du refinancement de la section de Welland et des versements prélevés sur le revenu net d'exploitation de la section de Montréal au lac Ontario, le solde des intérêts différés de l'Administration a été réduit durant l'année de \$79,000,000 qu'il était à la fin de 1964 à \$45,100,000.

AUDITOR GENERAL'S REPORT



AUDITOR GENERAL OF CANADA

Ottawa, March 29, 1966.

The Honourable J. W. Pickersgill,
Minister of Transport,
Ottawa.

Sir,

I have examined the accounts and financial statements of The St. Lawrence Seaway Authority for the year ended December 31, 1965.

Under the provision of section 16 of the St. Lawrence Seaway Authority Act, tolls are to be "designed to provide a revenue sufficient to defray the cost to the Authority of its operations", which costs are defined as including payments in respect of the interest on amounts borrowed by the Authority and amounts sufficient to amortize the principal of amounts so borrowed over a period not exceeding fifty years. The original conditions under which loans were made to the Authority under section 25 of the Act required the payment only of interest in the first three full years of operation (through the year ended December 31, 1962) and thereafter payment of annual amounts sufficient to amortize over a period of forty-seven years (or by December 31, 2009) all loans and interest thereon. The terms of the Authority's financing arrangements were amended in 1961, in 1963, and in 1964 and now call for repayment of all interest-bearing loans together with interest previously deferred and all other interest accrued or accruing up to December 31, 1966, together with current interest thereon, in forty-three equal annual instalments commencing December 31, 1967.

In accordance with these financial arrangements the year's operations have been charged with interest amounting to \$15,823,918 on long term loans but this interest has not been paid and is included in the balance sheet as part of the Proprietary Equity of the Government of Canada. There was no charge to the year's operations with respect to amortization of the principal of the amounts borrowed. Deferred interest for prior years was reduced by payment of \$49,676,151.

The accumulated deficit of \$27,073,300 on the operations of the Welland section of the Seaway for the calendar years 1959 to 1964 was reimbursed to the Authority with Parliamentary approval during 1965, and the Authority's indebtedness pertaining to the Welland section was converted to an interest-free loan. As indicated in Note 5 of the Notes to the Financial Statements, Parliament has been requested to provide also for the reimbursement to the Authority of the deficit of \$8,174,573, for the year ended December 31, 1965.

The costs of operating and maintaining the canals and works under the administration of the Authority are defined under paragraph (c) of section 16 as including all operating costs of the Authority and such reserves as may be approved by the Minister. The Authority is of the

opinion that it is not necessary to include depreciation as an element of operating and maintenance cost and that the amortization over the fifty-year period of the principal of the amounts borrowed together with interest as required by subsections (a) and (b) meets the requirements of the Act. Accordingly, no provision for depreciation has been included in the costs of the year under review.

As in previous years, provision was made during the year toward the cost of replacing lock, bridge and building machinery and equipment of the Montreal-Lake Ontario section. However, the basis for calculating the provision was changed retroactively from a cost basis to an estimated replacement cost basis. This resulted in a charge to Deficit of \$2,198,971. The provision for 1965 on this basis amounted to \$881,860, bringing the accumulated provision for replacement of machinery and equipment at December 31, 1965 up to \$5,765,701.

No provision was made in 1965 for replacement of machinery and equipment for the Welland section, and the accumulated provision for past years, \$2,130,839, was reversed and credited to Deficit.

No provision has been made in the accounts for the replacement of buildings, lock gates and lock and bridge structures in the two Seaway sections. The Authority

considers that these Seaway works can be maintained in working condition at all times under its maintenance programme.

In compliance with the requirements of section 87 of the Financial Administration Act, I report that, in my opinion, subject to the above observations:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statements of the Authority
 - (i) were prepared on a basis consistent with that of the preceding year, and are in agreement with the books of account,
 - (ii) in the case of the balance sheet, give a true and fair view of the state of the Authority's affairs as at the end of the financial year, and
 - (iii) in the case of the statement of income and expense, give a true and fair view of the income and expense of the Authority for the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

A. M. HENDERSON
Auditor General of Canada.



AUDITEUR GÉNÉRAL DU CANADA

Ottawa, le 29 mars 1966.

L'Honorable J. W. Pickersgill
Ministre des Transports
Ottawa

J'ai examiné les comptes et les états financiers de l'Administration de la voie maritime du Saint-Laurent pour l'année terminée le 31 décembre 1965.

En vertu de l'article 16 sur la Loi sur l'Administration de la voie maritime du Saint-Laurent, les péages sont destinés à assurer un revenu suffisant pour couvrir les frais d'exploitation de l'Administration, lesquels comprennent des versements à l'égard des intérêts sur les montants empruntés par l'Administration et des versements suffisants pour amortir le principal des montants empruntés en une période d'au plus cinquante ans. Aux termes de ces dispositions, les conditions initiales selon lesquelles des prêts étaient consentis à l'Administration en vertu de l'article 25 de la Loi n'exigeaient le paiement des intérêts que pendant les trois premières années entières d'exploitation (soit jusqu'au 31 décembre 1962); par la suite, il devait être payé des montants annuels suffisants pour amortir en quarante-sept ans (c'est-à-dire au cours d'une période se terminant le 31 décembre 2009) tous les emprunts et intérêts y afférents. Les termes des arrangements financiers de l'Administration ont été modifiés en 1961, en 1963 et en 1964. Ils prévoient maintenant le remboursement de tous les emprunts productifs d'intérêts, plus les intérêts précédemment différés et tous les autres intérêts courus ou à échoir au 31 décembre 1966, ainsi que les intérêts courants, en quarante-trois versements annuels égaux, à compter du 31 décembre 1967.

Conformément à ces arrangements financiers, les intérêts sur les opérations de l'année s'élèvent à \$15,823,918 sur les emprunts à long terme, mais ces intérêts n'ont pas été payés et ont été portés au bilan sous Part de propriétaire du Gouvernement du Canada. Rien n'a été porté aux opérations de l'année à l'égard de l'amortissement du principal des sommes empruntées. Les intérêts différés des années précédentes ont été réduits par suite d'un versement de \$49,676,151.

Le déficit accumulé de \$27,073,300 relativement à l'exploitation de la section de Welland de la voie maritime pour les années civiles 1959 à 1964 a été remboursé à l'Administration en 1965 avec l'approbation du Parlement, et la dette de l'Administration concernant la section de Welland a été convertie en un emprunt non productif d'intérêts. Tel qu'il est indiqué au paragraphe 5 des Remarques concernant les états financiers, il a été demandé au Parlement de pourvoir aussi au remboursement à l'Administration du déficit de \$8,174,573 pour l'année terminée le 31 décembre 1965.

Les frais d'exploitation et d'entretien des canaux et des ouvrages relevant de l'Administration sont définis, en vertu de l'alinéa c) de l'article 16, comme comprenant tous les frais d'exploitation de l'Administration ainsi que les réserves qui peuvent être approuvées par le Ministre. L'Administration est d'avis qu'il n'est pas nécessaire d'inclure la dépréciation dans les frais d'exploitation et d'en-

RAPPORT DU VÉRIFICATEUR GÉNÉRAL DES COMPTES

tretien et que l'amortissement au cours d'une période de cinquante ans du principal des emprunts ainsi que des intérêts, comme l'exigent les alinéas a) et b), satisfait aux exigences de la Loi. Les frais afférents à l'année à l'étude ne comprennent donc aucune réserve pour la dépréciation.

Comme par les années précédentes, une somme a été prévue pour le remplacement des machines et du matériel, notamment de ceux des écluses, ponts et bâtiments de la section de Montréal au Lac Ontario. Cependant, la formule de base servant à calculer cette somme a été changée et s'applique rétroactivement: ainsi, au lieu de se baser sur le prix coûtant, on se sert maintenant du coût estimatif de remplacement. Ceci a amené une imputation de \$2,198,971 sur le déficit. La somme prévue sur cette nouvelle base en 1965 s'est élevée à \$881,860, portant ainsi la somme accumulée affectée au remplacement des machines et du matériel à \$5,765,701 à la date du 31 décembre 1965.

Aucune somme n'a été affectée en 1965 à l'égard du remplacement des machines et du matériel de la section de Welland, et la réserve accumulée au cours des années précédentes, soit \$2,130,839, a été annulée et créditée au compte de déficit.

Aucune somme n'a été affectée dans les comptes à l'égard du remplacement des bâtiments, des portes d'écluse, des écluses et des ponts dans les deux sections de la voie maritime. L'Administration estime que ces ouvrages de la

voie maritime peuvent être tenus constamment en bon état dans le cadre de son programme d'entretien.

En conformité des prescriptions de l'article 87 de la Loi sur l'administration financière et sous réserve des observations qui précèdent, je déclare qu'à mon avis

- a) l'Administration a tenu des livres de comptabilité appropriés;
- b) les états financiers de l'Administration
 - (i) ont été préparés sur une base comparable à celle de l'année précédente et concordent avec les livres de comptabilité;
 - (ii) dans le cas du bilan, donnent un exposé juste et fidèle de l'état des affaires de l'Administration à la fin de l'année financière; et
 - (iii) dans le cas de l'état des recettes et des dépenses, donnent un exposé juste et fidèle des recettes et des dépenses de l'Administration pour l'année financière; et
- c) les opérations de l'Administration venues à ma connaissance étaient de la compétence de l'Administration aux termes de la Loi sur l'administration financière et de toute autre loi applicable à l'Administration.

A. M. HENDERSON,
L'Auditeur général du Canada.

THE ST. LAWRENCE SEAWAY AUTHORITY

(Established by the St. Lawrence Seaway Authority Act)

BALANCE SHEET AS AT DECEMBER 31, 1965

(with comparative figures as at December 31, 1964)

	ASSETS	1965	1964
	Current Assets:		
	Cash	204,007	\$ 92,844
	Treasury bills of Canada and short-term bank deposits	6,521,556	6,741,577
	Due from The Seaway International Bridge Corporation, Ltd.	164,530	
	Due from Government of Canada re:		
	Non-toll canals (Exhibit I)	423,445	228,254
	Welland Section operating deficit	8,174,573	
	Accounts receivable (less provision for doubtful accounts)	726,523	584,289
	Overpaid municipal grants	108,515	129,540
	Inventories of materials, minor equipment and shop work in progress, at cost (less reserve for obsolescence)	604,853	549,463
	Total Current Assets	16,928,002	8,325,967
	Bonds and Cash held as Contractors' Security Deposits and Toll Guarantees (contra)	674,692	619,881
	Investment in and Loan to The Seaway International Bridge Corporation, Ltd.	25,000	25,000
	Capital Assets, at cost or transfer value (Schedule B)	514,154,508	497,904,000
		<u>\$531,782,202</u>	<u>\$506,874,848</u>

The accompanying notes are an integral part of the financial statements.

Certified correct:

J. M. MARTIN

Director of Finance and Accounting

Approved:

P. CAMU

President

Notes to Financial Statements

1. Outstanding commitments under uncompleted contracts as at December 31, 1965 amounted to approximately \$18,700,000.
2. A claim for additional compensation in respect of a completed contract, originally in the amount of \$188,000, remained unsettled at December 31, 1965. The Authority's offer of \$36,000 in settlement of this claim, made with the approval of Treasury Board in 1961, has been rejected by the contractor who has filed an action against the Authority claiming \$254,000 and interest.

3. The liability of the Authority with respect to compensation for properties under expropriation at December 31, 1965 is estimated by the Authority as amounting to \$11,000,000.
4. In accordance with the provisions of Order in Council P.C. 1964-2036 of December 23, 1964, the principal amount of interest-bearing loans received under section 25 of the St. Lawrence Seaway Authority Act to finance construction of the Seaway, together with interest previously deferred and all other interest now accrued or accruing up to December 31, 1966, is to be repaid, together with current interest thereon, in forty-three equal annual instalments commencing December 31, 1967.

LIABILITIES		
	1965	1964
Current Liabilities:		
Accounts payable and accrued liabilities	\$ 5,033,495	\$ 2,148,670
Temporary loans under section 26 of the Act	6,770,000	
Due to Saint Lawrence Seaway Development Corporation re tolls	47,199	47,314
Contractors' holdbacks	627,837	129,658
Total Current Liabilities	12,478,531	2,325,642
Contractors' Security Deposits and Toll Guarantees (contra)	674,692	619,881
Accumulated Provision for Replacement of Machinery and Equipment	5,765,701	4,821,830
Proprietary Equity of the Government of Canada:		
Capital Assets entrusted to the Authority by the Governor in Council under section 14 of the Act (Welland Canal)	130,716,890	130,716,890
Loans under section 25 of the Act		
Interest-bearing	326,700,000	348,500,000
Interest-free	52,500,000	6,000,000
Interest on loans—payment deferred	45,145,000	78,997,233
	555,061,890	564,214,123
Deduct: Deficit—per Statement of Deficit	42,198,612	65,106,628
Net Equity	512,863,278	499,107,495
	\$531,782,202	\$506,874,848

I have examined the above Balance Sheet and the related Statement of Income and Expense and have reported thereon under date of March 29, 1966 to the Minister of Transport.

A. M. HENDERSON
Auditor General of Canada

5. *Tolls on the Welland section of the Seaway have been suspended since 1962. The operating deficit of the Welland section was financed during the year by means of interest-free temporary loans from the Government of Canada under section 26 of the Act. At December 31, 1965 these loans totalled \$6,770,000. Department of Transport Vote 107e, presented to the House of Commons on March 16, 1966, provides for reimbursement to the Authority of the Welland section deficit of \$8,174,573 for the year ended December 31, 1965.*

6. *The Accumulated Provision for Replacement of Machinery and Equipment amounting to \$5,765,701 at December 31, 1965 represents the accumulated provision, at estimated replacement values, for replacement of assets in the Montreal-Lake Ontario section of the Seaway which the Authority considers will require replacement. No provision has been made in the accounts for replacement of buildings, lock gates, and lock and bridge structures. The Authority considers that these Seaway works can be maintained in working condition at all times under its maintenance programme. No provision has been made for depreciation or replacement of assets in the Welland section.*

STATEMENT OF DEFICIT FOR THE YEAR ENDED DECEMBER 31, 1965

	MONTREAL- LAKE ONTARIO SECTION	WELLAND SECTION	TOTAL
Balance as at January 1, 1965	\$35,902,489	\$29,204,139	\$65,106,628
Add:			
Additional provision with respect to the years 1959 to 1964 for replacement of lock, bridge and building machinery and equipment to provide for estimated replacement values rather than original cost	2,198,971	—	2,198,971
	<u>38,101,460</u>	<u>29,204,139</u>	<u>67,305,599</u>
Deduct:			
Reversal of accumulated provision for replacement of lock, bridge and building machinery and equipment	—	2,130,839	2,130,839
Welland Canal operating deficit for the years 1959 to 1964 recovered from Department of Transport 1964-65 appropriations, Vote 107d	—	27,073,300	27,073,300
	<u>—</u>	<u>29,204,139</u>	<u>29,204,139</u>
	<u>38,101,460</u>	<u>—</u>	<u>38,101,460</u>
Add:			
Loss for the year, per Statement of Income and Expense	4,097,152	8,174,573	12,271,725
	<u>42,198,612</u>	<u>8,174,573</u>	<u>50,373,185</u>
Deduct:			
Welland Canal operating deficit for the year to be recovered from Department of Transport 1965-66 appropriations	—	8,174,573	8,174,573
Balance as at December 31, 1965	<u>\$42,198,612</u>	<u>\$ —</u>	<u>\$42,198,612</u>

ADMINISTRATION DE LA VOIE MARITIME DU SAINT-LAURENT

(Créée par la Loi sur l'Administration de la voie maritime du Saint-Laurent)

BILAN ARRÊTÉ AU 31 DÉCEMBRE 1965

(avec chiffres comparatifs au 31 décembre 1964)

	ACTIF	
	1965	1964
Disponibilités:		
Encaisse	\$ 204,007	\$ 92,844
Bons du Trésor du Canada et dépôts bancaires à court terme	6,521,556	6,741,577
Dette de la Seaway International Bridge Corporation, Ltd.	164,530	—
Dette du Gouvernement du Canada: canaux non soumis au péage (état I)	423,445	228,254
Déficit d'exploitation—section de Welland	8,174,573	—
Comptes débiteurs (moins provision pour créances douteuses)	726,523	584,289
Subventions à des municipalités payées en trop	108,515	129,540
Inventaires des matériaux, du matériel secondaire et des travaux d'atelier en cours, au prix coûtant (moins réserve pour matériel désuet)	604,853	549,463
Total des disponibilités	16,928,002	8,325,967
Cautionnements et espèces détenus à titre de dépôts de garantie des entrepreneurs et de garanties de péages (contre-partie)	674,692	619,881
Investissement et prêts—Seaway International Bridge Corporation, Ltd.	25,000	25,000
Immobilisations, au prix coûtant ou à la valeur de cession (Annexe B)	514,154,508	497,904,000
	<u>\$531,782,202</u>	<u>\$506,874,848</u>

Les remarques annexées font partie intégrante du présent état.

Certifié exact:

J. M. MARTIN

Le Directeur des finances et de la comptabilité

Approuvé:

P. CAMU

Le Président

Remarques concernant les états financiers

1. Les sommes restant à verser relativement aux contrats dont les travaux n'étaient pas terminés au 31 décembre 1965 s'élevaient à environ \$18,700,000.
2. Une demande de réclamation supplémentaire relative à l'exécution d'un contrat, qui était originairement de \$188,000, n'était pas encore réglée le 31 décembre 1965. L'offre de \$36,000, faite par l'Administration avec l'approbation du Conseil du Trésor, en 1961, a été rejetée par l'entrepreneur. Ce dernier a intenté une poursuite contre l'Administration et réclame \$254,000 et les intérêts.

3. L'Administration estime à onze millions de dollars la somme à verser pour l'indemnisation des biens en voie d'expropriation au 31 décembre 1965.
4. Conformément aux dispositions du décret C.P. 1964-2036 du 23 décembre 1964, le montant principal des emprunts productifs d'intérêts obtenus en vertu de l'article 25 de la Loi sur l'Administration de la voie maritime du Saint-Laurent pour le financement de la construction de la voie maritime, ainsi que les intérêts précédemment différés et tous les autres intérêts courus ou à échoir au 31 décembre 1966, devront être remboursés, de même que les intérêts courants, en quarante-trois versements annuels égaux, à compter du 31 décembre 1967.

	PASSIF	
	1965	1964
Exigibilités:		
Comptes créditeurs et passif cumulé	\$ 5,033,495	\$ 2,148,670
Emprunts temporaires en vertu de l'article 26 de la Loi	6,770,000	—
Somme due à la Saint Lawrence Seaway Development Corporation pour péages	47,199	47,314
Retenues des entrepreneurs	627,837	129,658
Total des exigibilités	12,478,531	2,325,642
Dépôts de garantie des entrepreneurs et garanties de péages (contre-partie)	674,692	619,881
Réserve accumulée pour renouvellement des machines et du matériel	5,765,701	4,821,830
Part de propriétaire du Gouvernement du Canada:		
Immobilisations confiées à l'Administration par le gouverneur en conseil en vertu de l'article 14 de la Loi (canal de Welland)	130,716,890	130,716,890
Emprunts en vertu de l'article 25 de la Loi		
Productifs d'intérêts	326,700,000	348,500,000
Non productifs d'intérêts	52,500,000	6,000,000
Intérêts sur emprunts—paiement différé	45,145,000	78,997,233
	555,061,890	564,214,123
Déduire: déficit, selon l'état du déficit	42,198,612	65,106,628
Part nette	512,863,278	499,107,495
	\$531,782,202	\$506,874,848

J'ai examiné le bilan ci-dessus ainsi que l'état des recettes et des dépenses s'y rapportant, et j'ai présenté un rapport au ministre des Transports le 29 mars 1966.

A. M. HENDERSON
L'Auditeur général du Canada

Les péages dans la section de Welland sont suspendus depuis juillet 1962. Le financement du déficit d'exploitation de la section de Welland durant l'année a été effectué au moyen d'emprunts temporaires non productifs d'intérêts obtenus de l'État en vertu de l'article 26 de la Loi. Au 31 décembre 1965, ces emprunts s'élevaient à \$6,770,000. Le crédit n° 107^e du ministère des Transports, présenté à la Chambre des communes le 16 mars 1966, prévoit le remboursement à l'Administration du déficit de \$8,174,573 de la section de Welland pour l'année terminée le 31 décembre 1965.

6. La réserve accumulée pour le renouvellement des machines et du matériel, qui était de \$5,765,701 au 31 décembre 1965, représente la réserve accumulée, à la valeur estimative de renouvellement, pour le renouvellement des biens de la section de Montréal au lac Ontario de la voie maritime qui, de l'avis de l'Administration, devront être remplacés. Rien n'a été prévu dans les comptes pour le remplacement des bâtiments, des portes d'écluse, des écluses et des ponts. L'Administration estime que ces ouvrages de la voie maritime peuvent être tenus en état de fonctionnement en tout temps dans le cadre de son programme d'entretien. Rien n'a été prévu pour la dépréciation ou le renouvellement des biens dans la section de Welland.

ÉTAT DU DÉFICIT POUR L'ANNÉE TERMINÉE LE 31 DÉCEMBRE 1965

	SECTION DE MONTREAL AU LAC ONTARIO	SECTION DE WELLAND	TOTAL
Solde au 1 ^{er} janvier 1965	\$35,902,489	\$29,204,139	\$65,106,628
Ajouter:			
Réserve additionnelle pour les années 1959 à 1964 concernant le renouvellement des écluses, ponts, bâtiments, machines et matériel, fondée sur la valeur estimative de remplacement plutôt que sur le prix coûtant	2,198,971	—	2,198,971
	<u>38,101,460</u>	<u>29,204,139</u>	<u>67,305,599</u>
Déduire:			
Annulation de la réserve accumulée pour le renouvellement des écluses, ponts, bâtiments, machines et matériel	—	2,130,839	2,130,839
Déficit d'exploitation du canal de Welland pour les années 1959 à 1964 récupéré sur crédit n° 107d du ministère des Transports pour 1964-1965	—	27,073,300	27,073,300
	<u>—</u>	<u>29,204,139</u>	<u>29,204,139</u>
	<u>38,101,460</u>	<u>—</u>	<u>38,101,460</u>
Ajouter:			
Perte de l'année, selon l'état des recettes et des dépenses	4,097,152	8,174,573	12,271,725
	<u>42,198,612</u>	<u>8,174,573</u>	<u>50,373,185</u>
Déduire:			
Déficit d'exploitation du canal de Welland pour l'année écoulée à récupérer sur crédits du ministère des Transports pour 1965-1966	—	8,174,573	8,174,573
Solde au 31 décembre 1965	<u>\$42,198,612</u>	<u>\$ —</u>	<u>\$42,198,612</u>

STATEMENT OF INCOME AND EXPENSE
FOR THE YEAR ENDED DECEMBER 31, 1965

(with comparative figures for the year ended December 31, 1964)

	MONTREAL-L. ONTARIO		WELLAND
	1965	1964	1965
INCOME			
Tolls assessed	\$15,480,631	\$13,544,436	\$ —
Rentals	62,271	48,946	504,94
Wharfage	1,768	1,262	154,81
Interest	192,037	144,575	40,68
Miscellaneous	114,692	118,454	97,26
S.L.S. "Hercules" heavy lift charges	34,575	52,250	—
The Seaway International Bridge Corporation Ltd.—net income	164,530	198,689	—
	<u>16,050,504</u>	<u>14,108,612</u>	<u>797,67</u>
EXPENSE			
Operation and maintenance			
Salaries and wages	1,508,369	1,493,103	3,270,81
Employee benefits	139,653	134,460	280,60
Major maintenance materials and services	364,368	348,074	2,393,66
Grants in lieu of municipal taxes	40,111	27,737	394,29
Traffic survey to relieve shipping congestion	—	—	741,65
Bridge operating services by railway companies	77,974	70,587	79,95
Security guards	99,707	64,790	—
Inventory adjustment	—	61,220	—
Other materials and services	493,333	402,534	463,62
	<u>2,723,515</u>	<u>2,602,505</u>	<u>7,624,60</u>
Regional administration			
Salaries and wages	338,961	297,148	380,50
Employee benefits	33,708	32,109	33,44
Office expenses	22,388	22,476	23,16
Travel and removal	18,181	16,792	14,78
Miscellaneous	44,295	33,742	51,08
	<u>457,533</u>	<u>402,267</u>	<u>502,98</u>
Less: Portion applicable to non-toll canals	<u>170,843</u>	<u>160,505</u>	<u>42,75</u>
	<u>286,690</u>	<u>241,762</u>	<u>460,22</u>
Headquarters administration (Schedule A)	<u>324,918</u>	<u>387,577</u>	<u>644,98</u>
Engineering expense (Schedule A)	<u>53,501</u>	<u>54,804</u>	<u>171,10</u>
Economic survey	<u>124,579</u>	<u>—</u>	<u>—</u>
	<u>502,998</u>	<u>442,381</u>	<u>816,09</u>
Total expense	<u>3,513,203</u>	<u>3,286,648</u>	<u>8,900,92</u>
Net operating income (loss) before providing for interest and for replacement of machinery and equipment	<u>12,537,301</u>	<u>10,821,964</u>	<u>(8,103,24)</u>
Interest on loans from Government of Canada	<u>15,752,593</u>	<u>15,444,825</u>	<u>71,32</u>
Provision for replacement of machinery and equipment	<u>881,860</u>	<u>457,030</u>	<u>—</u>
	<u>16,634,453</u>	<u>15,901,855</u>	<u>71,32</u>
Net Loss for the Year	<u>\$ 4,097,152</u>	<u>\$ 5,079,891</u>	<u>\$ 8,174,57</u>

ÉTAT DES RECETTES ET DES DÉPENSES POUR L'ANNÉE TERMINÉE LE 31 DÉCEMBRE 1965

(avec chiffres comparatifs de l'année terminée le 31 décembre 1964)

ELLAND	TOTAL	
1964	1965	1964
—	\$15,480,631	\$13,544,436
427,604	567,214	476,550
246,790	156,585	248,052
25,248	232,692	169,823
241,853	211,954	360,307
—	34,575	52,250
—	164,530	198,689
941,495	16,848,181	15,050,107
2,779,844	4,779,185	4,272,947
285,214	420,253	419,674
1,215,590	2,758,033	1,563,664
338,929	434,405	366,666
256,073	741,652	256,073
78,890	157,932	149,477
—	99,707	64,790
41,479	—	102,699
296,648	956,954	699,182
5,292,667	10,348,121	7,895,172
255,366	719,464	552,514
23,678	67,152	55,787
17,942	45,552	40,418
14,640	32,968	31,432
27,316	95,379	61,058
338,942	960,515	741,209
30,870	213,597	191,375
308,072	746,918	549,834
637,759	969,905	1,025,336
77,710	224,605	132,514
—	124,579	—
715,469	1,319,089	1,157,850
3,316,208	12,414,128	9,602,856
6,374,713)	4,434,053	5,447,251
619,402	15,823,918	18,064,227
407,836	881,860	864,866
1,027,238	16,705,778	18,929,093
1,401,951	\$12,271,725	\$ 13,481,842

RECETTES

Péages
Loyers
Droits d'accostage et de terre-plein
Intérêts
Divers
S.L.S. Hercules—droits de levage de charges lourdes
Seaway International Bridge Corporation Ltd.—(revenu net)

DÉPENSES

Exploitation et entretien

Traitements et salaires
Prestations aux employés
Travaux d'entretien importants, matériaux et services
Subventions tenant lieu d'impôts municipaux
Relevé du trafic effectué en vue de réduire les encombrements
Exploitation de ponts par des compagnies de chemin de fer
Service de sécurité
Ajustements d'inventaires
Autres matériaux et services

Administration régionale

Traitements et salaires
Prestations aux employés
Frais de bureau
Voyages et déménagements
Divers

Moins: partie applicable aux canaux non soumis au péage

Administration centrale (Annexe A)

Services techniques (Annexe A)

Etude économique

Dépenses totales

Perte nette d'exploitation avant provision pour intérêts et renouvellement des machines et du matériel

Intérêts sur prêts du Gouvernement du Canada:
Provision pour renouvellement des machines et du matériel

Perte nette de l'année

Schedule A

STATEMENT OF HEADQUARTERS ADMINISTRATION AND ENGINEERING EXPENSE
FOR THE YEAR ENDED DECEMBER 31, 1965

(with comparative figures for the year ended December 31, 1964)

HEADQUARTERS ADMINISTRATION

Salaries of members and executive officers

1965

\$ 137,91

Other salaries

842,27

Employee benefits

86,25

Office expenses

53,96

Communications

51,83

Travel and removal

44,40

Grants in lieu of municipal taxes

35,33

Rental of office machines

34,58

Office accommodation

22,40

Miscellaneous

39,26

1,348,23

Less portion allocated to:

Non-toll canals

145,08

Construction costs

233,24

378,33

Total per Statement of Income and Expense

\$ 969,90

ENGINEERING

Salaries and wages

\$ 834,05

Employee benefits

77,42

Office accommodation

72,70

Office expenses

69,62

Travel and removal

60,10

Miscellaneous

46,23

1,160,14

Less portion allocated to:

Non-toll canals

11,07

Construction costs

924,46

935,54

Total per Statement of Income and Expense

\$ 224,60

Annexe A

ÉTAT DES DEPENSES DE L'ADMINISTRATION CENTRALE ET DES SERVICES
TECHNIQUES POUR L'ANNÉE TERMINÉE LE 31 DÉCEMBRE 1965

(avec chiffres comparatifs de l'année terminée le 31 décembre 1964)

1964	ADMINISTRATION CENTRALE
144,508	Traitements des membres et du personnel de direction
797,334	Autres traitements et salaires
87,221	Prestations aux employés
53,690	Frais de bureau
35,621	Communications
46,280	Voyages et déménagements
30,255	Subventions tenant lieu d'impôts municipaux
28,566	Location de machines de bureau
22,400	Bureaux
27,681	Divers
273,556	

	Moins partie applicable aux
150,744	canaux non soumis au péage
97,476	Frais de construction
248,220	

025,336	Total, selon l'état des recettes et des dépenses
---------	--

	SERVICES TECHNIQUES
608,066	Traitements et salaires
56,272	Prestations aux employés
52,276	Bureaux
45,521	Frais de bureau
50,570	Voyages et déménagements
20,398	Divers

833,103	
	Moins partie applicable aux
12,468	canaux non soumis au péage
688,121	Frais de construction

700,589	
132,514	Total, selon l'état des recettes et des dépenses

Schedule B

CAPITAL ASSETS AS AT DECEMBER 31, 1965

(with comparative figures as at December 31, 1964)

	MONTREAL- L. ONTARIO (1)	PONT NORTH CHANNEL BRIDGE (1)	WELLAND Acquired Acquires (1)
Land	\$ 8,782,528	\$ 501,804	\$ 1,459,75
Buildings	1,762,171	1,005,004	18,73
Channels and canals	116,968,597	—	28,191,80
Locks	115,220,859	—	5,548,66
Bridges	25,528,981	7,067,984	176,44
Gatelifters	2,693,554	—	—
Movable equipment—including shore, floating, shop and other equipment	1,034,810	—	542,07
Works under construction	933,360	—	20,092,80
	<u>272,924,860</u>	<u>8,574,792</u>	<u>56,030,27</u>
Remedial works—expenditures on property owned by others	46,165,373	—	7,03
	<u>\$319,090,233</u>	<u>\$ 8,574,792</u>	<u>\$ 56,037,31</u>

(1) at cost

(2) at transfer value

Note—The Authority also administers at Lachine, Cornwall, Sault Ste. Marie and the Niagara Peninsula, non-trading
canals and other properties comprising land and improvements with a cost valuation of \$48,103,504 and
movable equipment with a cost valuation of \$1,157,393.

IMMOBILISATIONS AU 31 DÉCEMBRE 1965

(avec chiffres comparatifs au 31 décembre 1964)

WELLAND		TOTAL		
Entrusted Confiées (2)	1965	1964		
1,917,716	\$ 12,661,807	\$ 12,693,120		Terrains
3,522,055	6,307,966	6,306,850		Bâtiments
36,435,591	181,595,992	181,573,719		Chenaux et canaux
78,925,095	199,694,614	199,671,703		Écluses
8,340,817	41,114,227	41,114,227		Ponts
772,220	3,465,774	3,461,441		Lève-portes
538,674	2,115,554	2,015,821		Matériel mobile—y compris le matériel flottant, riverain, d'atelier et autre
—	21,026,162	5,054,559		Ouvrages en construction
30,452,168	467,982,096	451,891,440		
—	46,172,412	46,012,560		Ouvrages de protection, dépenses sur des biens appartenant à d'autres
30,452,168	\$514,154,508	\$497,904,000		

1 au prix coûtant

2 à la valeur de cession

Parque—L'Administration administre en outre à Lachine, à Cornwall, à Sault-Sainte-Marie et dans la péninsule de Niagara, des canaux soumis au péage et d'autres biens qui comprennent des terrains et des améliorations dont la valeur au prix coûtant est de \$48,103,504 et du matériel mobile dont la valeur au prix coûtant est de \$1,157,393.

Exhibit I
NON-TOLL CANALS
STATEMENT OF EXPENSE, INCOME AND CAPITAL EXPENDITURES
FOR THE YEAR ENDED DECEMBER 31, 1965

(with comparative figures for the year ended December 31, 1964)

	19
EXPENSE:	
Operation and maintenance:	
Salaries and wages	\$1,209,0
Employee benefits	105,6
Major maintenance materials and services	91,0
Other materials and services	212,7
Loss on disposal of obsolete materials	1,8
Grants in lieu of municipal taxes	245,6
Special grants to municipalities	—
	<u>1,866,0</u>
Administration and engineering expense (portion applicable to non-toll canals):	369,7
Total expense	<u>2,235,8</u>
INCOME:	
Rentals	343,8
Wharfage	50,8
Miscellaneous	233,3
Total income	<u>628,0</u>
Operating deficit	1,607,7
CAPITAL EXPENDITURES:	
Construction of works	76,8
Acquisition of equipment	5,8
	<u>82,7</u>
Net expenditures	<u>\$1,690,50</u>
Recovered from:	
Department of Transport 1964-65 appropriations, Vote 105	\$ 375,4
Department of Transport 1965-66 appropriations, Vote 105	891,5
	<u>1,267,0</u>
Balance to be recovered from appropriations	423,4
	<u>\$1,690,5</u>

État I

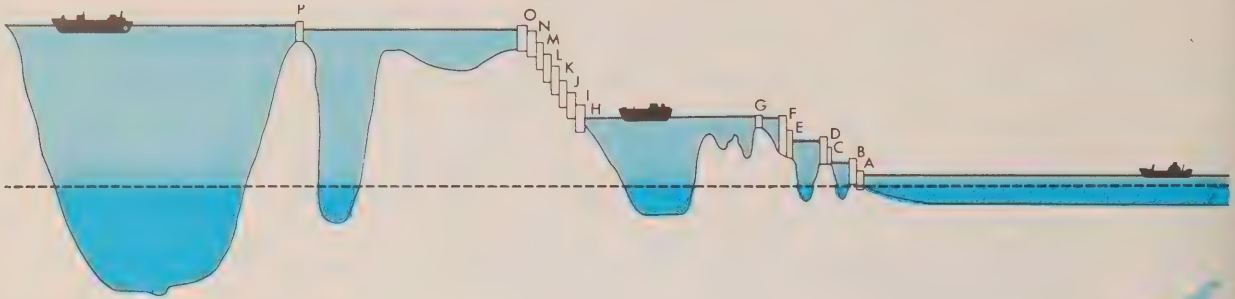
CANAUX NON SOUMIS AU PÉAGE
ÉTAT DES DÉPENSES, DES RECETTES ET DES IMMOBILISATIONS POUR
L'ANNÉE TERMINÉE LE 31 DÉCEMBRE 1965

(avec chiffres comparatifs de l'année terminée le 31 décembre 1964)

1964	
	DÉPENSES:
	Exploitation et entretien:
256,651	Traitements et salaires
124,665	Prestations aux employés
194,556	Travaux d'entretien importants, matériaux et services
251,643	Autres matériaux et services
(30,297)	Perte relative à la disposition de matériaux désuets
420,891	Subventions tenant lieu d'impôts municipaux
40,000	Subventions spéciales à des municipalités
258,109	
	Administration et services techniques
354,587	(partie applicable aux canaux non soumis au péage)
312,696	Dépenses totales
	RECETTES:
368,168	Loyers
58,894	Droits d'accostage et de terre-plein
108,033	Divers
335,095	Recettes totales
77,601	Déficit d'exploitation
	DÉPENSES EN IMMOBILISATIONS:
90,164	Construction d'ouvrages
13,370	Acquisition de matériel
103,534	
81,135	Dépenses nettes
	Récupéré sur
	Credit n° 105 du ministère des Transports pour 1964-1965
	Crédit n° 105 du ministère des Transports pour 1965-1966
	Solde à récupérer sur les crédits

SEAWAY PROFILE

PROFIL DE LA VOIE MARITIME



SEAWAY LOCKS ÉCLUSES DE LA VOIE MARITIME

LOCK/ÉCLUSE	ELEVATION AU- DESSUS DU NIVEAU DE LA MER, EN PIEDS*		DISTANCE, A PARTIR DE MONTREAL, EN MILLES		HEURES DE NAVIGATION
	HAUTEUR DE CHUTE, EN PIEDS	ELEVATION - FEET ABOVE SEA LEVEL*	FROM MONTREAL DISTANCE - MILES	SAILING TIME HOURS	
A St. Lambert	18.0	38.0	0	0	
B Cote Ste. Catherine	30.0	68.0	10	2	
No.1 C Beauharnois	42.0	110.0	30	6	
No.2 D Beauharnois	42.0	152.0	30.5	7	
E Snell	47.0	200.0	81	12	
F Eisenhower	42.0	242.0	85	14	
G Iroquois	3.0	246.0	110	17	
H Welland - No. 1	43.0	289.0	335	38	
I Welland - No. 2	46.5	335.5	337	40	
J Welland - No. 3	46.5	382.0	340	42	
K-M Welland - No. 4, 5, 6	139.5	521.5	342	47	
Flight Locks/en tandem					
N Welland - No. 7	47.5	569.0	343	49	
O Welland - No. 8	3.0	572.0	360	52	
P Sault Ste. Marie	19.5	602.0	937	92	

*Varies with fluctuating lake and river levels.

* L'élévation varie selon les fluctuations des niveaux de l'eau des lacs et des rivières.

La voie maritime du Saint-Laurent, voie navigable parcourant le fleuve et cinq grands lacs et ayant quelque 9,500 milles carrés de surface, donne accès à des villes importantes de chaque côté de la voie navigable internationale et dessert ainsi l'industrie et l'agriculture des régions intérieures de l'Amérique du Nord. Cette région continentale d'une superficie de plus de 1,285,000 milles carrés, comprenant le Centre nord des Etats-Unis et des parties de quatre provinces canadiennes, fait vivre une population de près de 61 millions de personnes. On l'a appelée à la fois le centre industriel et la corbeille à pain du continent.

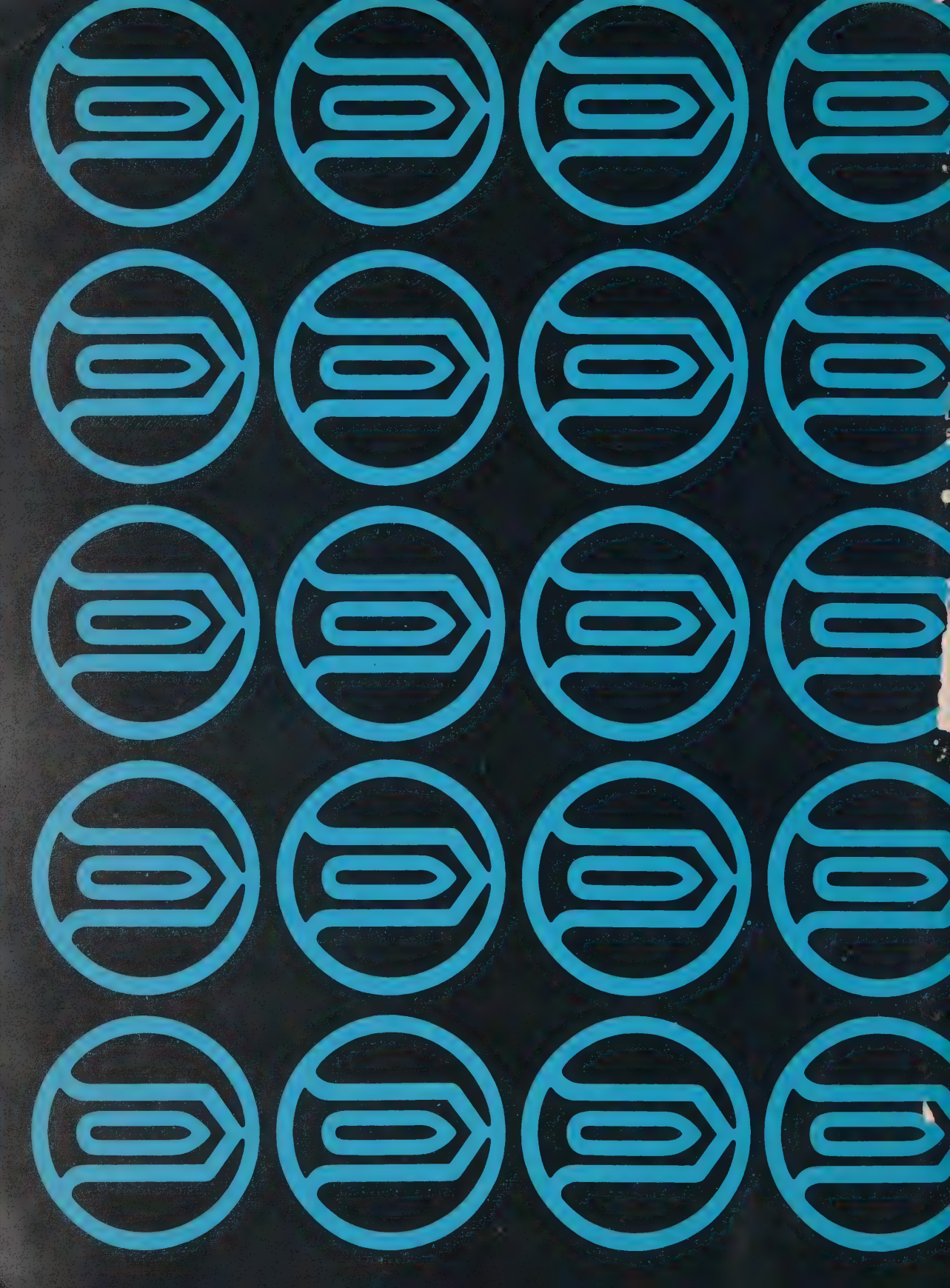
Le centre du continent, plus que toute autre partie de l'un ou l'autre des deux pays, est depuis de nombreuses années une région de commerce international favorisant l'établissement et l'expansion de ports le long de ses 8,300 milles de littoral. C'est en passant par ces ports que des quantités de plus en plus grandes de cargaisons en vrac et de marchandises diverses—grains, minéral de fer, charbon et produits manufacturés—viennent alimenter le commerce de l'hémisphère et du monde. Chaque année, un plus grand nombre de navires empruntant la voie maritime du Saint-Laurent transportent de plus grandes quantités de marchandises d'exportation et d'importation en provenance et à destination de cette vaste région, transformant les villes riveraines des lacs et du fleuve en ports maritimes intérieurs débordant d'activité.

The St. Lawrence Seaway—a network of navigable waters comprised of the river and five vast lakes and consisting of some 9500 square miles of waterway—provides access to important cities on either side of the international waterway, thus serving the industrial and agricultural heartland of North America.

This continental core, extending over 1,285,000 square miles, including the North-Central section of the United States and parts of four Canadian provinces, sustains a population of almost 61 million people. It has been described as both an industrial centre and as the breadbasket of the continent.

The Mid-continent—more so than any other region of either nation—has been deeply involved in international trade for many years, providing impetus for the development and expansion of ports along its 8,300 mile shoreline. It is through these ports that ever-increasing tonnages of bulk and general cargoes—grain, iron ore, coal and manufactured goods—pour into the commerce of the hemisphere and the world. Each year more ships move more goods—exports and imports—into and out of this vast region, through the St. Lawrence Seaway, transforming lakeshore and riverside cities into bustling inland seaports.





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The St. Lawrence Seaway Authority (Annual) Report

Administration de la voie maritime
du Saint-Laurent
Rapport Annuel



1966



Additional copies of this report are available from the Queen's Printer, Ottawa, Canada, and Canadian Government Bookshops, Catalogue No. TS1-1966, price 35c. Also available are the Traffic Report 1966, catalogue No. TS-2/1966, price 75c, and the Seaway Handbook, containing circulars and regulations for transit of the Seaway, catalogue No. TS2-1964, price \$5.00.

On peut se procurer le présent rapport annuel chez l'Imprimeur de la Reine, à Ottawa, et dans les librairies du gouvernement fédéral, n° de catalogue TS1-1966, au prix de 35c. l'exemplaire, Le Rapport sur le trafic de la voie maritime en 1966, n° de catalogue TS-2/1966, au prix de 75c. l'exemplaire, ainsi que le Manuel de la Voie maritime, qui renferme les circulaires et le règlement relatif au transit dans la voie maritime, n° de catalogue TS2-1964, au prix de \$5 l'exemplaire, y sont aussi en vente.

The St. Lawrence Seaway Authority Annual Report

Administration de la voie maritime du Saint-Laurent Rapport Annuel



1966



An ocean vessel, upbound into the Great Lakes, approaches
St. Lambert Lock, near Montreal, entrance to the St. Lawrence Seaway.

*Un océanique, qui se dirige vers les Grands lacs, s'approche de l'écluse de
Saint-Lambert, près de Montréal, à l'entrée de la voie maritime du Saint-Laurent.*



Executive Officers — Personnel de direction

President	Pierre Camu
Président	
Vice-President	Peter E. R. Malcolm
Vice-président	
Member	Delmer E. Taylor
Membre	

Director of Operations	R. J. Burnside
Directeur de l'exploitation	
Counsel	J. T. Carvell
Avocat-conseil	
Chief Engineer	W. R. Mackay
Ingénieur en chef	
Director of Finance & Accounting	J. M. Martin
Directeur des finances et de la comptabilité	
Director of Construction	W. A. O'Neil
Directeur de la construction	
Director of Administration	T. J. Quigg
Directeur de l'administration	
Director of Economics & Research	G. V. N. Sainsbury
Directeur des études économiques et des recherches	
Secretary	L. E. Béland
Secrétaire	
Director, Eastern Region	R. L'Heureux
Directeur, région de l'Est	
Director, Western Region	A. M. Luce
Directeur, région de l'Ouest	

Locations — Adresses

Head Office:	396 Cooper Street, Ottawa 4, Ontario.
Siège social:	
Cornwall Headquarters:	Corner of Pitt & Second Sts., Cornwall, Ontario.
Bureaux de Cornwall:	
Eastern Region:	Ecluse de Saint-Lambert, Saint-Lambert, Québec.
Région de l'Est:	
Western Region:	508 Glendale Avenue, St. Catharines, Ontario.
Région de l'Ouest:	
Engineering Headquarters:	5250, rue Ferrier, Montréal 9 ^e , Québec.
Division du génie, bureau central:	
Welland Modernization and Twinning Project:	508 Glendale Avenue, St. Catharines, Ontario.
Projet de modernisation et de jumelage-Welland:	

The year in brief

Sommaire de l'année

	1966	1965	Variation (%)	
MONTREAL-LAKE ONTARIO SECTION				SECTION DE MONTREAL AU LAC ONTARIO
Total number of transits	7,341	7,330		Nombre total de transits
Total cargo tonnage	49,249,358	43,382,864	+ 13.5	Tonnage total des cargaisons
Average cargo tonnage per transit	6,709	5,919	+ 13.3	Tonnage moyen des cargaisons par transit
Total toll revenue in \$	24,334,362	21,809,012	+ 11.6	Total des péages, en dollars
Average toll revenue per transit in \$	3,315	2,975	+ 11.4	Moyenne des péages par transit, en dollars
**WELLAND SECTION				SECTION DE WELLAND **
Total number of transits	8,714	8,384	+ 3.9	Nombre total de transits
Total cargo tonnage	59,271,666	53,420,179	+ 10.9	Tonnage des cargaisons
Average cargo tonnage per transit	6,802	6,372	+ 6.7	Tonnage moyen des cargaisons par transit
TRAFFIC COMPOSITION				COMPOSITION DU TRAFIC
Montreal-Lake Ontario (Local)				Montréal au lac Ontario (Local)
Transits	2,087	2,174	-- 4.0	Transits
Total cargo	6,627,342	6,554,809	+ 1.1	Total des cargaisons
Welland (Local)				Welland (Local)
Transits	3,406	3,228	+ 5.5	Transits
Total cargo	17,503,918	16,592,124	+ 5.5	Total des cargaisons
Through Traffic				Trafic d'entier parcours
Transits	5,122	5,156	- 0.7	Transits
Total cargo	42,667,597	36,828,055	+ 15.9	Total des cargaisons

*Includes both Canadian and U.S. revenues.

**Tolls suspended on Welland Section, July 18, 1962.

*Comprend la part des péages revenant au Canada et aux Etats-Unis.

**Péages sur le canal de Welland suspendus le 18 juillet 1962.

The President's Message

March 31, 1967.

The Honourable J. W. Pickersgill,
Minister of Transport,
Ottawa.

Dear Sir:

The St. Lawrence Seaway Authority submits the annual report for the year 1966.

This report reviews the eighth season of operation of the Seaway between Montreal and Lake Erie and includes the operation of non-toll canals administered by the Authority.

Cargo tonnage through both sections of the Seaway increased, eclipsing records established only one year ago. Montreal-Lake Ontario tonnage rose by 13.5 per cent while the Welland Section registered an increase of 11.0 per cent, over 1965 totals.

The increase in cargoes on the Montreal-Lake Ontario Section resulted in higher revenues and the smallest deficit since the opening of the Seaway. Revenues for this section, operated jointly with the United States' Saint Lawrence Seaway Development Corporation, rose by \$2.5 million to a total of \$24.3 million. The Authority's share of these tolls amounted to \$17.3 million, an increase of \$1.8 million over 1965. The collection of tolls on the Welland Section, which is operated entirely by Canada, remains suspended.

The Montreal-Lake Ontario Section of the Seaway opened to traffic on April 1, the earliest date on record, and closed December 15th, completing the longest season — 259 days — since the opening of that section in 1959. The Welland Canal opened April 4 and also closed on December 15.

In June, a new Eastern Region headquarters building, located adjacent to the St. Lambert Lock, was opened by the Minister of Transport.

In October, the laker *Stonefax* was involved in a collision in the long reach between locks 7 and 8 of the Welland Canal. The ship's master secured the vessel to the bank of the channel before it sank,

preventing a complete blockage of the canal. The vessel was successfully salvaged in November.

Public hearings were held in Ottawa during May in connection with the review of Seaway tolls. The United States Seaway administration held similar hearings in Chicago during June. The Authority submitted its report on Seaway tolls to the Government on June 30.

In May, the Federal Government announced approval for the construction of a new section of Welland Canal channel, 8.3 miles in length — by-passing the City of Welland — having an estimated cost of \$107 million. The Government also gave approval in principle for the necessary expropriation and study of a new alignment of the Welland Canal between Thorold and Lake Ontario.

At the year-end, appraisals of 279 of the 460 expropriated properties in the Welland Section had been completed, with 196 offers accepted. In the Melocheville-Beauharnois area of the Montreal-Lake Ontario Section all appraisals of the 85 expropriated properties had been completed with 40 offers accepted.

A further improvement in Welland Canal operations was realized during the year, resulting from refinements to operational procedures, completion of additional construction and the installation of a modern traffic control centre. Between 1960 and December 31, 1966, a total of \$47.1 million has been spent on Welland modifications. Additional improvements are anticipated.

Yours sincerely,



Pierre Camu,
President.

Financial Review

Sommaire financier

	1966	1965	Variation	
MONTREAL-LAKE ONTARIO SECTION				SECTION DE MONTRÉAL AU LAC ONTARIO
Income	\$18,333,014	\$16,050,504	+ \$2,282,510	Recettes
Operating expenses and replacement provision	<u>5,253,258</u>	<u>4,395,063</u>	+ <u>858,195</u>	Dépenses d'exploitation et montant prévu pour le remplacement
Net operating income	13,079,756	11,655,441	+ 1,424,315	Recettes nettes d'exploitation
Deduct interest on loans	<u>16,302,905</u>	<u>15,752,593</u>	+ <u>550,312</u>	Moins les intérêts sur les emprunts
Net loss for the year	<u><u>\$(3,223,149)</u></u>	<u><u>\$(4,097,152)</u></u>	— <u><u>\$(874,003)</u></u>	Perte nette de l'année
WELLAND SECTION				SECTION DE WELLAND
Income (from rents, wharfage, etc.)	\$ 1,063,104	\$ 797,677	+ \$ 265,427	Recettes (loyers, droits d'accostage et de terre-plein, etc.)
Operating expenses and replacement provision	<u>11,112,295</u>	<u>8,900,925</u>	+ <u>2,211,370</u>	Dépenses d'exploitation et montant prévu pour le remplacement
Net operating loss	(10,049,191)	(8,103,248)	+ 1,945,943	Perte nette d'exploitation
Add interest on loans	<u>9,768</u>	<u>71,325</u>	— <u>61,557</u>	Plus les intérêts sur les emprunts
Net loss for the year	<u><u>\$(10,058,959)</u></u>	<u><u>\$(8,174,573)</u></u>	+ <u><u>\$1,884,386</u></u>	Perte nette de l'année
COMBINED RESULTS				SECTIONS COMBINÉES
Income	\$19,396,118	\$16,848,181	+ \$2,547,937	Recettes
Operating expenses and replacement provision	<u>16,365,553</u>	<u>13,295,988</u>	+ <u>3,069,565</u>	Dépenses d'exploitation et montant prévu pour le remplacement
Net operating income	3,030,565	3,552,193	— 521,628	Recettes nettes d'exploitation
Deduct interest on loans	<u>16,312,673</u>	<u>15,823,918</u>	+ <u>488,755</u>	Moins les intérêts sur les emprunts
Net loss for the year	<u><u>\$(13,282,108)</u></u>	<u><u>\$(12,271,725)</u></u>	+ <u><u>\$1,010,383</u></u>	Perte nette de l'année

Message du Président

Le 31 mars 1967

L'honorable J. W. Pickersgill
Ministre des Transports
Ottawa

Monsieur le Ministre,

L'Administration de la voie maritime du Saint-Laurent présente son rapport annuel pour l'année 1966.

Ce rapport porte sur la huitième saison d'exploitation de la voie maritime, entre Montréal et le lac Érié, et des canaux administrés par l'Administration qui ne sont pas soumis au péage.

Le tonnage des cargaisons transportées dans les deux sections de la voie maritime a augmenté, éclipçant les records établis il y a seulement un an. Entre Montréal et le lac Ontario, ce tonnage s'est accru de 13.5 p. 100, tandis que dans la section du canal de Welland, on a enregistré une augmentation de 11 p. 100 par rapport à l'année 1965.

L'augmentation du trafic des cargaisons dans la section de Montréal au lac Ontario a entraîné une hausse des recettes, de sorte que la voie maritime a connu son plus faible déficit depuis son inauguration. Pour cette section, exploitée conjointement avec la *Saint Lawrence Seaway Development Corporation* des Etats-Unis, les recettes ont augmenté de \$2,500,000 pour s'établir à \$24,300,000. La part de ces recettes revenant à l'Administration s'est élevée à \$18,300,000, soit une augmentation de \$1,800,000 par rapport à 1965. Le péage qui avait été suspendu dans la section de Welland, qui est exploitée entièrement par le Canada, n'a pas été rétabli.

La section de Montréal au lac Ontario de la voie maritime a été ouverte à la navigation le 1er avril, soit la date la plus hâtive jusqu'ici, et a été fermée le 15 décembre après une saison de 259 jours, la plus longue depuis l'inauguration de cette section en 1959. La saison de navigation dans le canal de Welland qui avait commencé le 4 avril a aussi pris fin le 15 décembre.

En juin, le ministre des Transports a inauguré un nouvel immeuble devant abriter l'administration de la région de l'Est et situé à l'écluse de Saint-Lambert.

En octobre, le navire des lacs STONEFAX a été impliqué dans un abordage dans la longue section entre les écluses 7 et 8 du canal de Welland. Le capitaine a amarré son navire à la rive du chenal avant qu'il ne coule, ce qui a évité l'obstruction totale du canal. Le navire a pu être renfloué en novembre.

Des audiences publiques se sont tenues à Ottawa, en mai, relativement à la révision des péages de la voie maritime. L'Administration de la voie maritime des Etats-Unis a tenu des audiences semblables à Chicago en juin. Le 30 juin l'Administration a présenté au gouvernement son rapport sur les péages.

En mai, le gouvernement fédéral a annoncé l'approbation de la construction d'une nouvelle section de chenal dans le canal de Welland, section de 8.3 milles de longueur devant contourner la ville de Welland et d'un coût estimatif de 107 millions. Le gouvernement a aussi approuvé en principe les expropriations nécessaires et une étude sur la modification du tracé du canal de Welland entre Thorold et le lac Ontario.

A la fin de l'année, on avait terminé l'évaluation de 279 des 460 propriétés à exproprier dans la section de Welland et 196 offres avaient été acceptées. Dans la région de Melocheville-Beauharnois de la section de Montréal au lac Ontario, toutes les propriétés à exproprier, soit 85, avaient été évaluées et 40 offres avaient été acceptées.

Au cours de l'année, une nouvelle amélioration a été apportée à l'exploitation du canal de Welland, par suite de l'application de meilleures procédures, de la construction de nouveaux ouvrages et de l'établissement d'un système moderne de contrôle de la circulation. Les modifications apportées au canal de Welland entre 1960 et le 31 décembre 1966 ont coûté \$47,100,000. D'autres améliorations sont envisagées.

Respectueusement,

Le Président,



Pierre Camu.

Operations

Vessel transits through the Montreal-Lake Ontario Section were almost unchanged, totalling 7,341; the Welland Section increased by four per cent to a total of 8,714. The increased cargo tonnages reflect the trend towards the use of larger vessels.

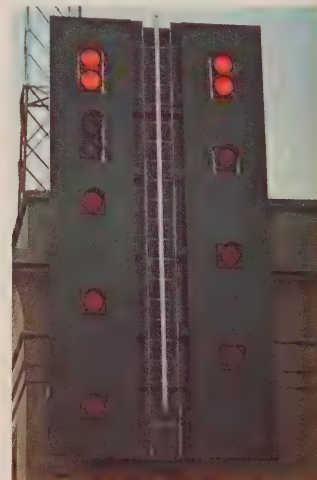
Transportation consultants, retained through 1964 and 1965, continued their efforts during 1966 in the Welland Section. The introduction of improved vessel movement techniques and new traffic control methods have combined to further reduce average vessel round trip transit times to 31.7 hours. During the year a peak of 38 lockages was attained in Welland locks on five occasions.

A new centralized traffic control centre on the Welland was brought into operation in the Fall. It utilizes closed circuit television and telemetry to monitor and direct traffic through the canal. Two traffic controllers and a traffic superintendent are on duty 24 hours a day throughout the navigation season. Control centre personnel, in addition to controlling vessel movements provide masters and pilots with information as to the location and characteristics of vessels in their area. Public information service is also available; the centre handles between 500 and 600 calls daily.



The freighter LONDON CITIZEN moves downbound past a telemetering signal board, Lock 1, Welland Canal.

Le navire de charge LONDON CITIZEN passe devant un panneau de signaux de télémesure à l'écluse n° 1 du canal de Welland.



A telemetering signal board, flanked by a television camera tower, Welland Canal.

Panneau de signaux de télémesure, flanqué d'un pylône de caméra de télévision, sur le canal de Welland.

Exploitation

Le nombre de transits dans la section de Montréal au lac Ontario a été à peu près le même, s'étant établi à 7,341; il y a eu augmentation de 4 p. 100 dans la section de Welland où le total a atteint 8,714. L'augmentation du tonnage des cargaisons indique la tendance à employer de plus gros navires.

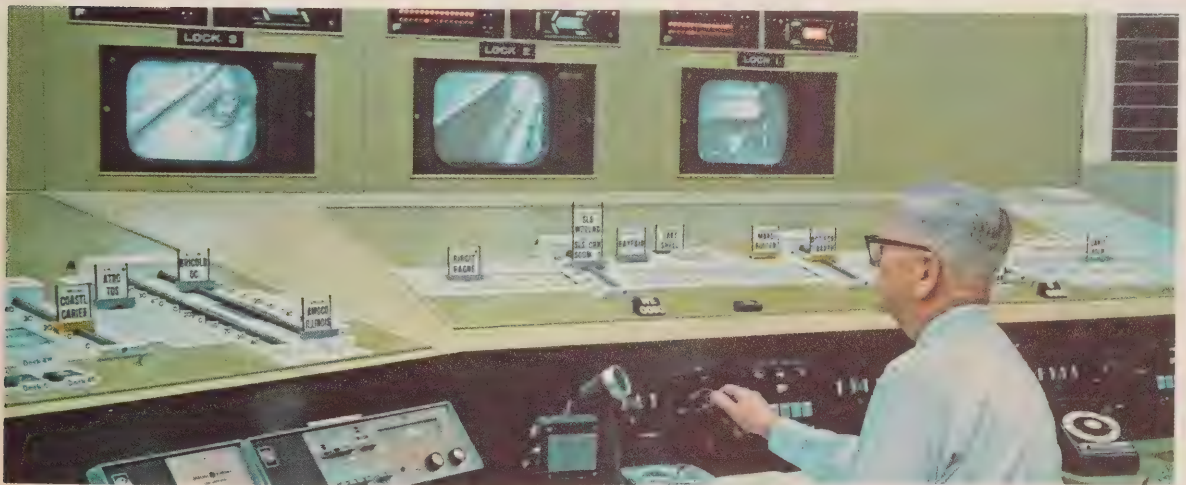
Des spécialistes en matière de transport dont les services avaient déjà été retenus en 1964 et en 1965 ont poursuivi leurs travaux dans la section de Welland en 1966. L'application de meilleures techniques en ce qui concerne le mouvement des navires et la mise en oeuvre de nouvelles méthodes de contrôle de la circulation ont conduit à une nouvelle réduction du temps de transit aller et retour qui est maintenant de 31.7 heures. A cinq reprises, au cours de l'année, il a été effectué 38 éclusages dans les écluses de Welland.

Un nouveau poste de commande centralisée de la circulation a été mis en service à l'automne, au canal de Welland. On y utilise la télévision en circuit fermé et la télémesure pour contrôler et diriger la circulation des navires dans le canal. Deux contrôleurs et un surintendant de la circulation sont de service 24 heures sur 24 durant toute la saison de navigation. En plus de diriger les mouvements des navires, le personnel du centre de contrôle renseigne les capitaines et les pilotes sur la situation et les caractéristiques des navires qui se trouvent dans la zone. Un service d'information à l'intention du public est aussi disponible; le centre reçoit de 500 à 600 appels par jour.



The Japanese freighter MIKAGESAN MARU, downbound through the Montreal-Lake Ontario section of the St. Lawrence Seaway.

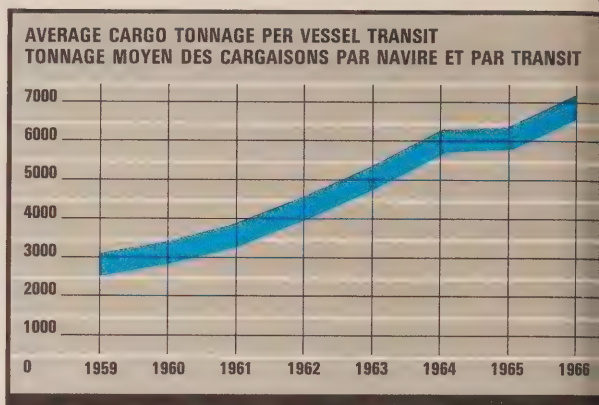
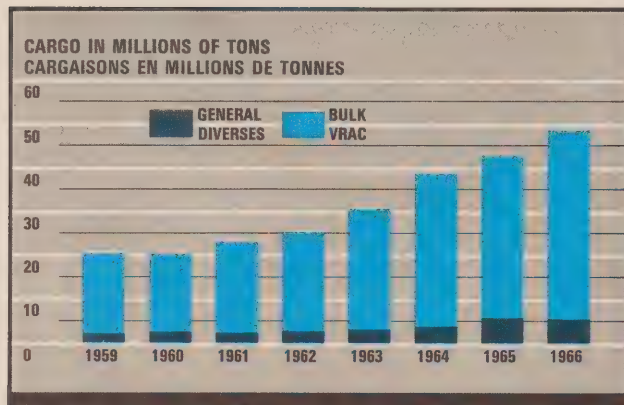
Le navire de charge japonais MIKAGESAN MARU traverse en direction aval le tronçon Montréal — lac Ontario de la voie maritime du Saint-Laurent.



An interior view of the new Welland control centre, showing telemetering and closed circuit television installations.

Vue intérieure du nouveau centre de contrôle de Welland, montrant les installations de télémesure et de télévision en circuit fermé.

MONTREAL-LAKE ONTARIO SECTION SECTION DE MONTREAL AU LAC ONTARIO



Statistical Summary (figures in millions)

Sommaire statistique (montants en million)

MONTREAL- L. ONTARIO

	1959*	1960	1961	1962	1963	1964	1965	1966
Cargo — tons								
Cargaisons — tonnes	20.6	20.3	23.4	25.6	30.9	39.3	43.4	49.0
Revenue								
Recettes	\$ 7.4	\$ 7.3	\$ 8.2	\$ 9.2	\$ 11.2	\$ 14.2	\$ 16.1	\$ 18.3
Expenses†								
Frais†	\$ 2.1	\$ 2.8	\$ 3.2	\$ 3.8	\$ 4.0	\$ 4.2	\$ 4.4	\$ 5.0
Net operating profit								
Profit net d'exploitation	\$ 5.3	\$ 4.5	\$ 5.0	\$ 5.4	\$ 7.2	\$ 10.0	\$ 11.7	\$ 13.3
Interest								
Intérêt	\$ 7.4	\$ 11.5	\$ 12.7	\$ 13.8	\$ 14.7	\$ 15.5	\$ 15.8	\$ 16.3
Loss for year†								
Perte de l'année†	\$ 2.1	\$ 7.0	\$ 7.7	\$ 8.4	\$ 7.5	\$ 5.5	\$ 4.1	\$ 3.2
Debt at year end‡								
Dette à la fin de l'année‡	\$283.4	\$300.6	\$321.2	\$337.1	\$356.7	\$362.8	\$370.8	\$375.2

*Operating expenses and interest are for nine months.

*Frais d'exploitation et intérêts pour neuf mois.

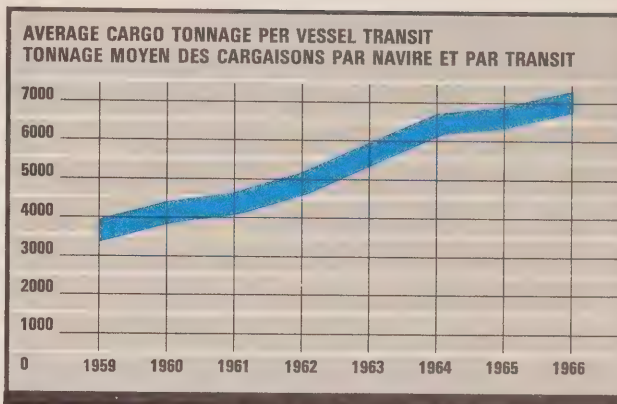
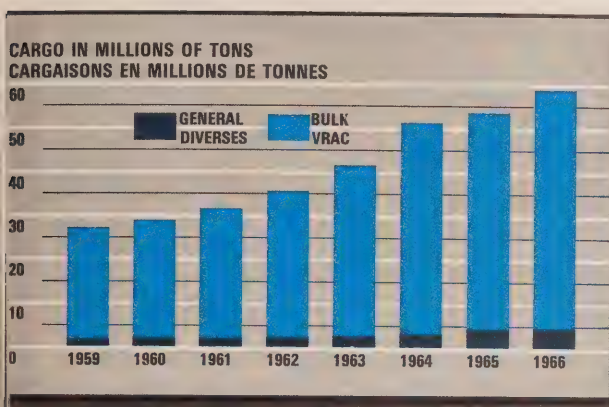
†Reflecting 1965 retroactive adjustment to replacement provision.

†Réflecte l'ajustement rétroactif apporté, en 1965, à la provision pour renouvellement.

‡Debt equals borrowing plus deferred interest.

‡La dette égale les emprunts plus les intérêts différés.

WELLAND SECTION SECTION DE WELLAND



Statistical Summary (figures in millions)

Sommaire statistique (montants en million)

WELLAND

	1959*	1960	1961	1962	1963	1964	1965	1966
Cargo — tons								
Cargaisons — tonnes	27.5	29.2	31.5	35.4	41.2	51.4	53.4	59.3
Revenue‡								
Recettes‡	\$ 1.8	\$ 2.0	\$ 2.2	\$ 1.4	\$ 0.8	\$ 0.9	\$ 0.8	\$ 1.1
Expenses								
Frais	\$ 2.4	\$ 3.7	\$ 4.6	\$ 4.4	\$ 4.9	\$ 6.3	\$ 8.9	\$ 11.2
Net operating loss								
Perte net d'exploitation	\$ 0.6	\$ 1.7	\$ 2.4	\$ 3.0	\$ 4.1	\$ 5.4	\$ 8.1	\$ 10.1
Interest								
Intérêt	\$ 0.7	\$ 1.2	\$ 1.5	\$ 1.8	\$ 2.1	\$ 2.6	\$ 0.1	—
Loss for the year								
Perte de l'année	\$ 1.3	\$ 2.9	\$ 3.9	\$ 4.8	\$ 6.2	\$ 8.0	\$ 8.2	\$ 10.1
Debt at year end								
Perte à la fin de l'année	\$ 25.3	\$ 29.7	\$ 32.4	\$ 33.0	\$ 40.0	\$ 43.6	\$ 53.6	\$ 80.2

*Operating expenses and interest are for nine months.

*Frais d'exploitation et intérêts pour neuf mois.

‡Welland tolls were suspended on July 18th, 1962.

‡Les péages dans le canal de Welland ont été suspendus le 18 juillet 1962.

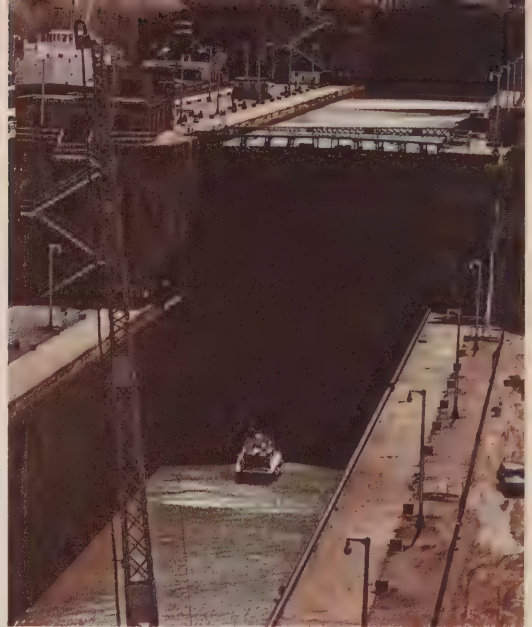
Traffic

Traffic through the Seaway established all-time records in 1966.

In the Montreal-Lake Ontario Section cargo tonnage exceeded original traffic forecasts for the first time in the waterway's eight year existence, amounting to 49,249,358 tons — an increase of 13.5 per cent. Vessels of the inland fleet carried cargoes of 34.9 million tons. Overseas shipping, led by vessels of United Kingdom and Norwegian registry, accounted for 14.4 million tons.

Welland Section tonnage rose by 11 per cent, to a record 59,271,666 tons. Vessels engaged in inland trade carried 47.0 million tons; ocean vessels carried 12.2 million tons.

Transits of big vessels continued to increase during the year with vessels of over 700 feet in length carrying almost one-third of the cargo through both sections.



A small pleasure craft prepares to scale the Niagara Escarpment via the Welland flight locks.

Une petite embarcation de plaisance se prépare à franchir l'escarpement de Niagara par l'échelle d'écluses du canal de Welland.



Vessel traffic in the pool separating the Upper and Lower Beauharnois locks, Montreal-Lake Ontario section.

Navires dans la retenue séparant les écluses amont et aval de Beauharnois, dans le tronçon Montréal — lac Ontario.

Trafic

Le trafic dans la voie maritime a atteint en 1966 un sommet sans précédent.

Dans la section de Montréal au lac Ontario, le tonnage des cargaisons a excédé les prévisions originales pour la première fois dans les huit années d'existence de la voie maritime, s'étant établi à 49,249,358 tonnes, soit une augmentation de 13.5 p. 100. Les navires d'eau intérieures ont transporté 34,600,000 tonnes de cargaisons. Les navires océaniques, ayant à leur tête des navires immatriculés au Royaume-Uni et en Norvège, ont transporté 14,600,000 tonnes.

Dans la section de Welland, le tonnage a augmenté de 11 p. 100 pour atteindre le chiffre record de \$59,271,666 tonnes. Les navires affectés à la navigation intérieure ont transporté 47 millions de tonnes et les océaniques 12,200,000.

Le nombre des gros navires qui transitent dans la voie maritime a continué d'augmenter au cours de l'année, des navires de plus de 700 pieds de longueur y ayant transporté près du tiers du total des cargaisons pour les deux sections.



The laker LEMOYNE, first vessel through the Welland after its opening to traffic in 1932, moves upbound, using the same flight locks, 34 years later.

Le navire de lacs LEMOYNE, le premier à avoir franchi le canal de Welland après son inauguration en 1932, se dirige vers l'amont, en utilisant la même échelle d'écluses, 34 ans plus tard.

Up and downbound vessel traffic above Lock 3 of the Welland Canal.

Navires remontants et descendants en amont de l'écluse n° 3 du canal de Welland



Organization

The Authority's total work force amounted to 1,724 permanent employees at the year-end, an increase of 93 over the 1965 total of 1,631.

A new branch, concentrating on economics and certain research fields, was formed and Mr. G. V. N. Sainsbury appointed director.

The Authority's operations group was augmented during the year to continue a number of special studies initiated by consultants.

Mr. W. A. O'Neil, formerly Project Director, Welland Project, was appointed Director of Construction, responsible for all construction activities throughout the Authority.

Several new training programs were developed and language instruction initiated for Authority personnel.

A number of recent university graduates from various academic disciplines joined the organization for training and development for potential management careers.



Organisation

Le personnel de l'Administration comprenait 1,724 employés permanents à la fin de l'année, soit une augmentation de 93 par rapport au total de 1965 qui était de 1,631.

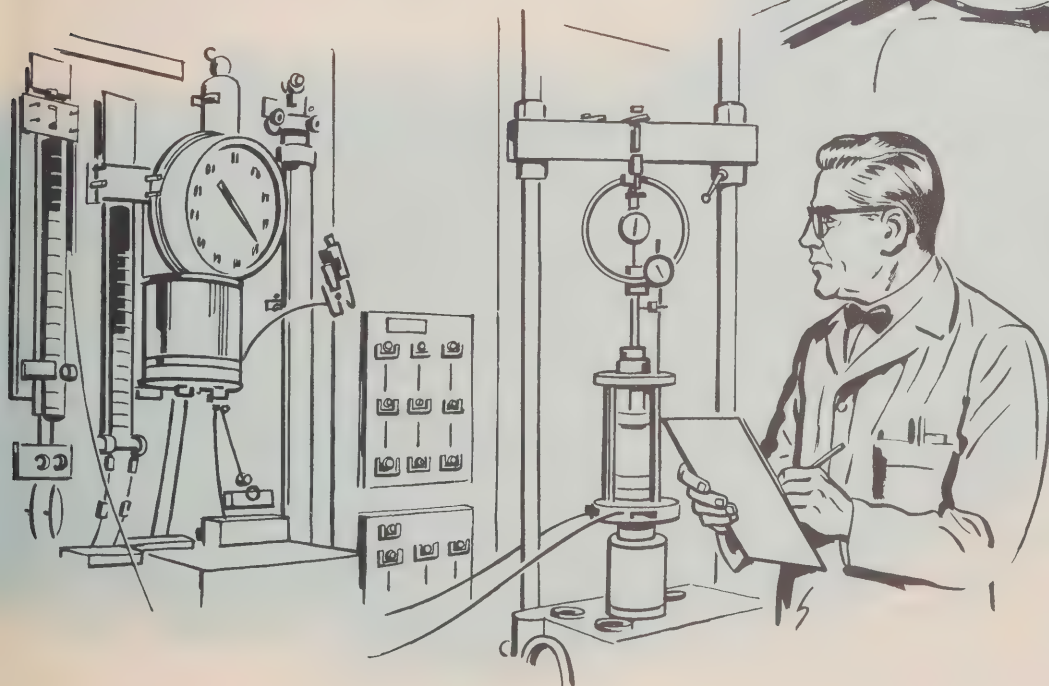
Une nouvelle direction s'occupant spécialement de questions économiques et de la recherche dans certains domaines a été établie et M. G. V. N. Sainsbury en a été nommé directeur.

L'Administration a augmenté le nombre des membres de son groupe d'étude sur l'exploitation, en vue de la poursuite d'études spéciales commencées par des spécialistes.

M. W. A. O'Neil, ancien directeur du projet de Welland, a été nommé directeur de la Construction, assumant la responsabilité de tous les travaux de construction de l'Administration.

Plusieurs nouveaux programmes de formation ont été établis et des cours de langues ont été inaugurés à l'intention du personnel de l'Administration.

Un certain nombre de nouveaux diplômés d'université, de diverses disciplines, reçoivent dans les cadres de l'Administration une formation qui pourra éventuellement les conduire à une carrière administrative.



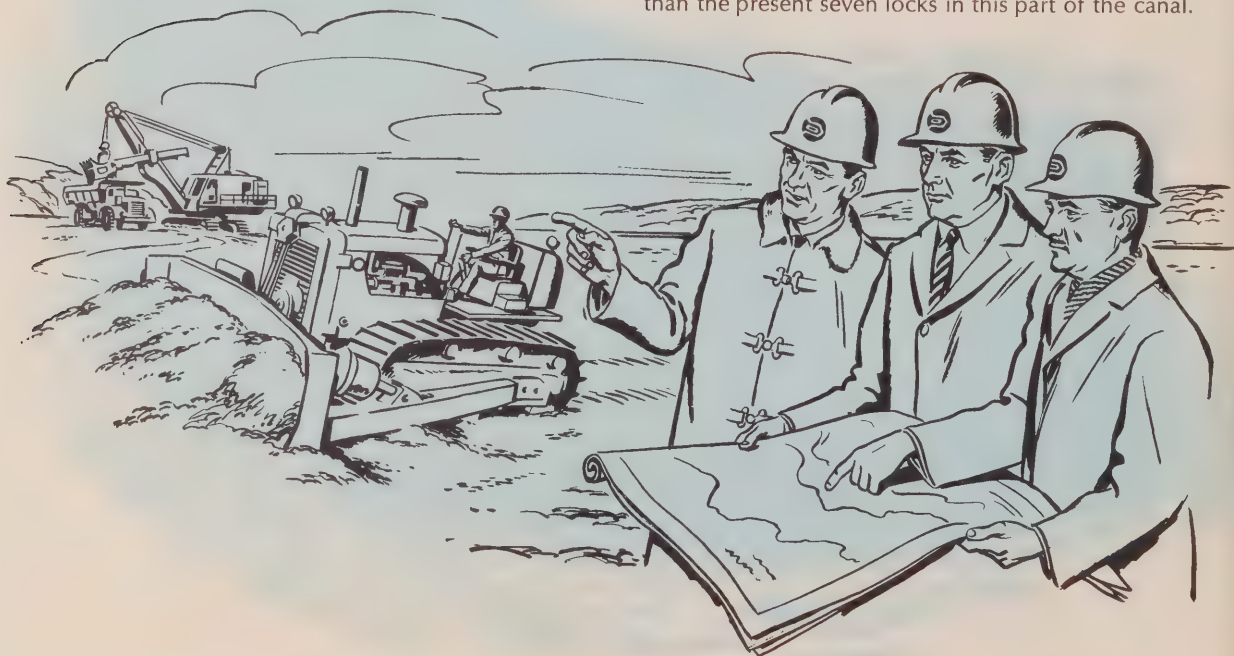
Planning and Construction

Work continued on Welland Canal modernization with 40 contracts valued at more than \$5.8 million awarded. Construction with a total value of \$14.3 million was completed during the year.

Contracts to allow a greater flow of water in the 10 miles of the South Shore canal between the Cote Ste. Catherine and St. Lambert locks of the Montreal-Lake Ontario Section commenced in late 1966. The water in this canal, due to the minimal water current, has shown a tendency to freeze very quickly, in fact, well before the water in the river and this has happened sometimes before the official closing of navigation. These works will generate a greater flow of water which will assist in countering freezing conditions at the end of the navigation season.

Construction of the new channel between Port Robinson and Ramey's Bend in the Welland Section commenced with the awarding of land clearing contracts; the first excavation contracts are expected early in 1967.

Planning and feasibility studies were undertaken for a possible new section of canal between Thorold and Lake Ontario which might involve four new locks, substantially larger and with a much greater capacity than the present seven locks in this part of the canal.



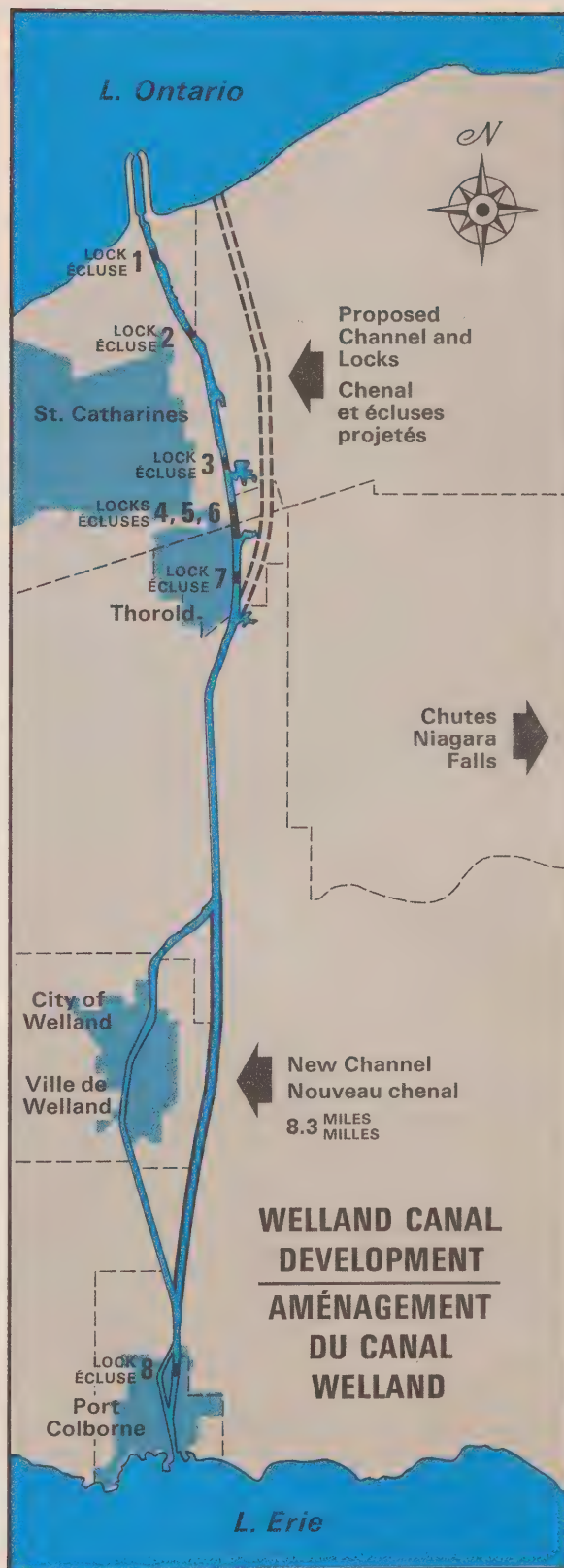
Planification et construction

Le programme de modernisation du canal de Welland s'est poursuivi par l'adjudication de 40 contrats qui représentent une valeur globale de plus de \$5,800,000. Le coût des travaux terminés au cours de l'année atteint \$14,300,000.

L'exécution de contrats pour des travaux destinés à augmenter le débit des eaux dans les dix milles du canal de la rive sud entre l'écluse de Côte-Sainte-Catherine et celle de Saint-Lambert, dans la section de Montréal au lac Ontario, a commencé vers la fin de 1966. Etant donné qu'il y a peu de courant dans le canal, les eaux y ont tendance à geler très tôt, de fait bien avant celles du fleuve, et il est arrivé qu'elles prennent avant la clôture officielle de la navigation. Le plus grand débit des eaux qui résultera de ces travaux aidera à combattre le gel vers la fin de la saison de navigation.

On a adjugé des contrats pour le déblaiement du terrain en vue de la construction du nouveau chenal entre Port Robinson et Ramey's Bend, dans la section de Welland; on s'attend que les premiers contrats d'excavation soient donnés au début de 1967.

Des travaux de planification et des études sur la possibilité d'exécution ont été entreprises au sujet de la construction d'une nouvelle section de canal entre Thorold et le lac Ontario, laquelle pourrait comprendre quatre nouvelles écluses sensiblement plus grandes et d'une capacité beaucoup plus grande que les sept écluses actuelles de cette partie du canal.



Commodity Trade



The RIMOUSKI, a laker, 730 feet in length; the largest class of vessels to use the Seaway—loads wheat at the Lakehead.

Le RIMOUSKI, navire de lacs de 730 pieds de longueur, prend un chargement de blé à Lakehead. Il fait partie de la classe des plus grands navires pouvant utiliser la voie maritime.

Bulk shipments accounted for 43.8 million tons, or 89 per cent of all cargoes through the Montreal-Lake Ontario Section. The total represents an increase of 15.8 per cent over the 1965 level. General cargoes amounted to 5.5 million tons, down two per cent from 1965's record level.

In the Welland, bulk cargoes totalled 54.5 million tons, a gain of 12 per cent over 1965, and representing 92 per cent of all shipments. General cargo amounted to 4.8 million tons, up marginally from 1965's record of 4.7 million tons.

Iron ore was again the most important commodity on both sections of the waterway, accounting for 15.5 million tons in the Montreal-Lake Ontario Section and 17.7 million tons in the Welland. These totals reflect increases of 21 and 10 per cent over 1965 totals.

Wheat shipments through both regions recorded substantial increases. A total of 11.2 million tons was shipped through the Montreal-Lake Ontario Section, up by 38 per cent, while the Welland Section handled 11.7 million tons, an increase of 33 per cent.

Coal tonnage rose significantly in both sections to 1.2 million tons on the St. Lawrence and 7.7 million tons on the Welland.

Fuel oil, crushed stone, corn, barley, soybeans and manufactured iron and steel products were the other major commodity items,



The laker THOROLD discharges a cargo of pulpwood at the Ontario Paper Company dock in the Welland Canal.

Le navire de lacs THOROLD décharge une cargaison de bois à pâte au quai de l'Ontario Paper Company, dans le canal de Welland.

Transports des denrées

Dans la section de Montréal au lac Ontario, les cargaisons en vrac ont atteint 43,800,000 tonnes, soit 89 p. 100 de toutes les cargaisons qui y ont été transportées. Le tonnage global des cargaisons accuse une augmentation de 15.8 p. 100 par rapport à celui de 1965. Il a été transporté 5,500,000 tonnes de marchandises diverses, soit 2 p. 100 de moins que le chiffre record atteint l'année précédente.

Dans la section de Welland, le transport des cargaisons en vrac a atteint 54,500,000 tonnes, chiffre de 12 p. 100 plus élevé que celui de 1965 et représentant 92 p. 100 de toutes les cargaisons. Les marchandises diverses ont été de 4,800,000 tonnes, ce qui représente une minime augmentation par rapport au record de 1965 qui s'était établi à 4,700,000 tonnes.

Encore une fois, le minerai de fer a été la principale denrée transportée dans les deux sections de la voie maritime, les quantités en ayant été de 15,500,000 tonnes dans la section de Montréal au lac Ontario et de 17,700,000 tonnes dans la section de Welland. Ces totaux reflètent des augmentations de 21 et de 10 p. 100 par rapport à 1965.

Le transport du blé, dans les deux sections, a accusé de fortes augmentations. Au total, 11,200,000 tonnes ont été transportées dans la section de Montréal au lac Ontario, soit une augmentation de 38 p. 100, tandis que pour la section de Welland le chiffre est de 11,700,000 tonnes, 33 p. 100 de plus que l'année précédente.

Le tonnage du charbon transporté dans les deux sections a accusé une augmentation sensible, s'éta-

blissant à 1,200,000 tonnes pour le Saint-Laurent et à 7,700,000 pour la section de Welland.

Les autres denrées les plus importantes ont été l'huile combustible, la pierre concassée, le maïs, l'orge, la fève de soya et les articles manufacturés de fer et d'acier.



The MONTREALAIS, also 730 feet in length, climbs the Niagara Escarpment, bound for an American lake port with its cargo of iron ore.

Le MONTREALAIS, également de 730 pieds de longueur, remonte l'escarpement de Niagara, à destination d'un port américain des Grands lacs, avec une cargaison de minerai de fer.



The ocean vessel PATIGNIES moves downbound through the Lower Beauharnois Lock of the Montreal-Lake Ontario section with general cargo.

Le navire océanique PATIGNIES franchit en direction aval l'écluse aval de Beauharnois, dans le tronçon Montréal — lac Ontario, avec une cargaison de marchandises diverses.

Finance

The financial statements of the Authority as at December 31, 1966, and the Auditor General's report thereon, will be found on pages 20 to 37 of this Report. The Authority's sources of funds and the purposes for which they have been used are tabulated hereunder:

(millions of \$)					
	Montreal-Lake Ontario Section		Welland Section		Total
	Change in 1966	1 August, 1954 to 31 Dec., 1966	Change in 1966	1 April, 1959 to 31 Dec., 1966	
Net Receipts of Funds					
From Government of Canada					
Loans	\$.8	\$327.5	\$ 27.7	\$102.0	\$429.5
Advances, incl. deferment of cash interest payments	—	—	9.5	50.3	50.3
Parliamentary appropriation—deficit vote	—	—	8.1	35.2	35.2
From operations					
Profit before interest	13.1	62.2	—	—	62.2
Replacement provision	.9	6.8	—	—	6.8
Miscellaneous	—	1.1	.1	.4	1.5
Total Net Receipts	14.8	397.6	45.4	187.9	585.5
Funds Expended For					
Capital assets—gross additions	1.5	330.4	26.4	82.5	412.9
Repayment of loans	—	—	—	21.8	21.8
Repayment of advances	—	—	7.8	40.8	40.8
Loss before interest	—	—	10.1	35.3	35.3
Operating interest	12.7	59.9	—	10.0	69.9
Total Net Expenditures	14.2	390.3	44.3	190.4	580.7
Funds Retained (working capital)	\$.6	\$ 7.3	\$ 1.1	\$ (2.5)	\$ 4.8

For the Montreal-Lake Ontario Section tolls revenues increased by 11.6% from \$15.5 million in 1965 to a \$17.3 million record in 1966. The revenue increase of 11.6% was not, however, commensurate with the 13.5% increase achieved in cargo tonnage. This is accounted for by a decline, both actual and in relative importance, in general cargo tonnage, the toll for which, at 90¢ per ton, was 2.25 times greater than the bulk cargo toll. In 1966 bulk cargoes produced tolls revenues of \$12.4 million compared with \$10.9 million in 1965. The 1966 revenue from general cargoes, on the other hand, was \$3.5 million, showing a decline of 1.5%.

Tolls rates were unchanged in 1966 but for the reasons mentioned above, average revenue per cargo ton, at 35.09¢, declined by more than 1/2¢ per ton.

Payrolls and employee benefits attributable to the operations of the Montreal-Lake Ontario Section amounted to \$3.0 million (6.13¢ per cargo ton)

against \$2.2 million (5.02¢ per cargo ton) in 1965. Substantially all of this increase is the consequence of the 1966 wage settlement.

In 1966, loan interest amounted to \$16.3 million against \$15.75 million in the preceding year. However the 1966 net interest cost to the Authority (expense, less income from temporary investments and the Seaway International Bridge Corp. Ltd.) was relatively unchanged at \$15.5 million compared with \$15.4 million in 1965. Because of the stability of interest costs and the increase in cargo tonnage the net interest cost per ton of cargo in 1966 was 4.01¢ lower than in 1965.

At \$3.2 million (6.54¢ per cargo ton) the Section's 1966 net loss was \$0.9 million less than the 1965 loss of \$4.1 million (9.44¢ per cargo ton). The accumulated deficit at the end of 1966 amounts to \$45.4 million compared with \$42.2 million in December 1965.

An amount of \$12.7 million was paid out of earnings for the year against the Section's accumulated interest liability. After this payment, the indebtedness of the Authority at the year end, including deferred interest of \$47.7 million, amounted to \$375.2 million an increase of \$4.4 million during the year.

For the Welland Canal on which the cargo tolls continued to be suspended, the 1966 operation deficit was \$10.1 million against \$8.1 million in 1965. This operating deficit is subsidized by a Parliamentary vote.

Two items account for the \$2.0 million increase in the deficit. 1966 payroll and employee benefit costs attributable to the Welland amounted to \$5.7 million, up \$1.1 million over the \$4.6 million cost for 1965. Expenditures on major maintenance carried out in conjunction with the program designed to improve the operating efficiency of the Canal and to minimize traffic congestion were \$3.3 million compared with \$2.4 million in 1965.

During the year capital expenditures on the Welland Canal were \$26.4 million. These included:—land acquisitions — \$4.4 million; channel widening — \$3.2 million; lock improvements, including pondage enlargement — \$10.4 million; bridges and tunnels — \$2.9 million; engineering planning and supervision — \$3.5 million.

Activité financière

Les états financiers de l'Administration au 31 décembre 1966 et le rapport de l'Auditeur général s'y rapportant sont donnés aux pages 20 à 37 du présent rapport. Les sources de recettes de l'Administration et l'affectation de ces recettes sont indiquées dans les tableaux ci-dessous :

(en millions de dollars)					
	Section de Montréal au lac Ontario		Section de Welland		Total au 31 déc. 1966
	Changement en 1966	Du 1 ^{er} août 1964 au 31 déc. 1966	Changement en 1966	Du 1 ^{er} avril 1959 au 31 déc. 1966	
Recettes nettes					
Du gouvernement du Canada					
Emprunts	\$.8	\$327.5	\$ 27.7	\$102.0	\$429.5
Avances, y compris les paiements différés des intérêts en espèces	—	—	9.5	50.3	50.3
Crédit voté par le Parlement— crédit pour déficit	—	—	8.1	35.2	35.2
D'exploitation					
Bénéfice avant provision pour intérêts	13.1	62.2	—	—	62.2
Réserve pour renouvellement	.9	6.8	—	—	6.8
Divers	—	1.1	.1	.4	1.5
Recettes nettes totales	<u>14.8</u>	<u>397.6</u>	<u>45.4</u>	<u>187.9</u>	<u>585.5</u>
Dépenses					
Immobilisations—additions brutes	1.5	330.4	26.4	82.5	412.9
Remboursement des emprunts	—	—	—	21.8	21.8
Remboursement des avances	—	—	7.8	40.8	40.8
Perte avant provision pour intérêts	—	—	10.1	35.3	35.3
Intérêts d'exploitation	12.7	59.9	—	10.0	69.9
Dépenses nettes totales	<u>14.2</u>	<u>390.3</u>	<u>44.3</u>	<u>190.4</u>	<u>580.7</u>
Fonds retenus (capital de roulement)	<u>\$.6</u>	<u>\$ 7.3</u>	<u>\$ 1.1</u>	<u>\$ (2.5)</u>	<u>\$ 4.8</u>

Dans la section de Montréal au lac Ontario, les recettes provenant des péages ont augmenté de 11.6 p. 100 passant de \$15,500,000 en 1965 au chiffre record de \$17,300,000 en 1966. Toutefois, cette augmentation de 11.6 p. 100 des recettes ne correspond pas à l'augmentation du tonnage des cargaisons qui a été de 13.5 p. 100. Cet écart s'explique par le déclin tant réel qu'en importance relative des marchandises diverses auxquelles s'applique un péage de 90c. la tonne, soit 2¹/₄ fois le péage applicable au vrac. En 1966, les recettes provenant des marchandises en vrac ont été de \$12,400,000 comparativement à \$10,900,000 en 1965. D'autre part, les recettes de 1966 provenant des marchandises diverses ont été de \$3,500,000, soit une baisse de 1.5 p. 100.

Le tarif des péages n'a pas été modifié en 1966 mais, pour les raisons mentionnées ci-dessus, la recette moyenne par tonne de cargaison, qui s'est établie à 35.09c., accuse une baisse de 1/2c.

Les salaires et le coût des avantages sociaux au compte des employés pour l'exploitation de la sec-

tion de Montréal au lac Ontario se sont élevés à 3 millions de dollars (6.13c. par tonne de cargaison) comparativement à \$2,200,000 (5.02c. par tonne de cargaison) en 1965. Cette augmentation résulte presque entièrement du règlement sur les salaires intervenu en 1966.

En 1966, les intérêts sur les emprunts se sont élevés à \$16,300,000 contre \$15,750,000 l'année précédente. Toutefois, le coût net des intérêts (le coût moins le revenu provenant d'investissements temporaires et de la Seaway International Bridge Corp. Ltd.) a peu varié, s'étant établi à \$15,500,000 comparativement à \$15,400,000 en 1965. Par suite de la stabilité du coût des intérêts et de l'augmentation du tonnage des cargaisons, le coût net des intérêts par tonne de cargaison, en 1966, a été inférieur de 4.01c. à celui de 1965.

La perte nette de la Section pour 1966, soit \$3,200,000 (6.54c. par tonne de cargaison) est inférieure de \$900,000 à la perte de 1965 qui s'établissait à \$4,100,000 (9.44c. par tonne de cargaison). Le déficit accumulé à la fin de 1966 était de \$45,400,000 comparativement à \$42,200,000 en décembre 1965.

Un montant de \$12,700,000 a été pris sur les recettes de l'année et affecté au paiement d'intérêts accumulés sur la dette de la Section. Après ce paiement, la dette de l'Administration, à la fin de l'année, y compris les intérêts différés de \$47,700,000, s'établissait à \$375,200,000, soit une augmentation de \$4,400,000 durant l'année.

Pour le canal de Welland où les péages n'ont pas été rétablis, le déficit d'exploitation de 1966 a été de \$10,100,000 comparativement à \$8,100,000 en 1965. Ce déficit d'exploitation est comblé par un crédit du Parlement.

Deux postes rendent compte de l'augmentation de 2 millions de dollars du déficit. Les salaires et les avantages sociaux au compte des employés relatifs au canal de Welland se sont élevés à \$5,700,000 en 1966, soit \$1,100,000 de plus que les dépenses de \$4,600,000 de 1965. Le coût des travaux d'entretien afférents au programme d'amélioration de l'efficacité de l'exploitation du canal et de réduction de la congestion de la circulation a été de \$3,300,000 comparativement à \$2,400,000 en 1965.

Au cours de l'année, les dépenses en immobilisations au canal de Welland se sont élevées à \$26,400,000. Ces dépenses comprennent notamment l'acquisition de terrains, \$4,400,000; l'élargissement du chenal, \$3,200,000; l'amélioration des écluses, y compris l'augmentation de la capacité de retenue, \$10,400,000; des ponts et tunnels, \$2,900,000; des études techniques et la surveillance, \$3,500,000.

Auditor General's Report



AUDITOR GENERAL OF CANADA

Ottawa, March 29, 1967.

The Honourable J. W. Pickersgill,
Minister of Transport,
Ottawa.

Sir,

I have examined the accounts and financial statements of The St. Lawrence Seaway Authority for the year ended December 31, 1966.

Under the provision of section 16 of the St. Lawrence Seaway Authority Act, tolls are to be "designed to provide a revenue sufficient to defray the cost to the Authority of its operations", which costs are defined as including payments in respect of the interest on amounts borrowed by the Authority and amounts sufficient to amortize the principal of amounts so borrowed over a period not exceeding fifty years. The original conditions under which loans were made to the Authority under section 25 of the Act required the payment only of interest in the first three full years of operation (through the year ended December 31, 1962) and thereafter payment of annual amounts sufficient to amortize over a period of forty-seven years (or by December 31, 2009) all loans and interest thereon. The terms of the Authority's financing arrangements were amended in 1961, in 1963, in 1964 and in January 1967 and now call for repayment of all interest-bearing loans together with interest previously deferred and all other interest accrued or accruing up to December 31, 1967, together with current interest thereon, in forty-two equal annual instalments commencing December 31, 1968.

In accordance with these financial arrangements the year's operations have been charged with interest amounting to \$16,312,673 (excluding \$64,322 charged to construction costs) on long term loans but this interest has not been paid and is included in the balance sheet as part of the Proprietary Equity of the Government of Canada. There was no charge to the year's operations with respect to the amortization of the principal of the amounts borrowed. Deferred interest for prior years was reduced by payment of \$13,754,135.

Loans under section 25 of the Act totalled \$407,650,000 at December 31, 1966, of which \$80,200,000 was provided to finance improvements to, and the twinning of, the Welland Canal. Of the latter amount, loans totalling \$72,500,000 are interest free and the balance of \$7,700,000, provided since September 22, 1966, bears interest which amounted to \$47,860 at December 31, 1966. Interest on all such loans subsequent to September 22, 1966, is to be accrued in the accounts but is not to be paid until December 31 of the year in which the Minister of Transport determines that the construction on the Welland Canal Twinning Project is completed.

The costs of operating and maintaining the canals and works under the administration of the Authority are defined under paragraph (c) of section

16 as including all operating costs of the Authority and such reserves as may be approved by the Minister. The Authority is of the opinion that it is not necessary to include depreciation as an element of operating and maintenance cost and that the amortization over the fifty-year period of the principal of the amounts borrowed together with interest as required by subsections (a) and (b) meets the requirements of the Act. Accordingly, no provision for depreciation has been included in the costs of the year under review.

As in previous years, provision was made during the year toward the cost of replacing lock, bridge and building machinery and equipment of the Montreal-Lake Ontario Section which will require replacement in the fifty-year period. The provision for 1966, calculated on an estimated replacement cost basis, amounted to \$867,428, bringing the accumulated provision for replacement of machinery and equipment at December 31, 1966 up to \$6,574,436, after charges of \$58,693 for the acquisition of certain movable assets during the year. No provision was made in 1966 for replacement of machinery and equipment for the Welland Section.

No provision has been made for the replacement of buildings, lock gates and lock and bridge structures in the two Seaway sections. The Authority

considers that these Seaway works can be maintained in working condition at all times under its maintenance programme.

In compliance with the requirements of section 87 of the Financial Administration Act, I report that, in my opinion, subject to the above observations:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statements of the Authority
 - (i) were prepared on a basis consistent with that of the preceding year, and are in agreement with the books of account,
 - (ii) in the case of the balance sheet, give a true and fair view of the state of the Authority's affairs as at the end of the financial year, and
 - (iii) in the case of the statement of income and expense, give a true and fair view of the income and expense of the Authority for the financial year; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,
A. M. HENDERSON
Auditor General of Canada

Rapport du vérificateur général des comptes



AUDITEUR GÉNÉRAL DU CANADA

Ottawa, le 29 mars 1967

L'Honorable J. W. Pickersgill
Ministre des Transports
Ottawa

Honorable Ministre,

J'ai examiné les comptes et les états financiers de l'Administration de la voie maritime du Saint-Laurent pour l'année terminée le 31 décembre 1966.

En vertu de l'article 16 de la Loi sur l'Administration de la voie maritime du Saint-Laurent, les péages sont destinés à assurer un revenu suffisant pour couvrir les frais d'exploitation de l'Administration, lesquels comprennent des versements d'intérêts sur les montants empruntés par l'Administration et des versements suffisants pour amortir le principal des emprunts en une période d'au plus cinquante ans. Aux termes de ces dispositions, les conditions initiales selon lesquelles des prêts étaient consentis à l'Administration en vertu de l'article 25 de la Loi n'exigeaient le paiement des intérêts que pendant les trois premières années entières d'exploitation (soit jusqu'au 31 décembre 1962); par la suite, il devrait être payé des montants annuels suffisants pour amortir en quarante-sept ans (c'est-à-dire au cours d'une période se terminant le 31 décembre 2009) tous les emprunts et intérêts y afférents. Les termes des arrangements financiers de l'Administration ont été modifiés en 1961, en 1963, en 1964 et en janvier 1967. Ils prévoient maintenant le remboursement de tous les emprunts productifs d'intérêts, plus les intérêts précédemment différés et tous les autres intérêts courus ou à échoir au 31 décembre 1967, ainsi que les intérêts courants, en quarante-deux versements annuels égaux, à compter du 31

décembre 1968.

Conformément à ces arrangements financiers, les intérêts sur les opérations de l'année s'élèvent à \$16,312,673 (compte non tenu des \$64,322 imputés sur les frais de construction) sur les emprunts à long terme, mais ces intérêts n'ont pas été payés et ont été portés au bilan sous Part de propriétaire du Gouvernement du Canada. Rien n'a été porté aux opérations de l'année à l'égard de l'amortissement du principal des emprunts. Les intérêts différés des années précédentes ont été réduits par suite d'un versement de \$13,754,135.

Les prêts consentis à l'Administration en vertu de l'article 25 de la Loi s'élevaient, au 31 décembre 1966, à \$407,650,000, dont \$80,200,000 ont été empruntés pour financer l'amélioration et le jumelage du canal de Welland. Sur ce dernier montant, des prêts formant un total de \$72,500,000 ne sont pas productifs d'intérêts et les intérêts sur le reste, c'est-à-dire sur les \$7,700,000 reçus depuis le 22 septembre 1966, s'élevaient à \$47,860 au 31 décembre 1966. Les intérêts sur tous les prêts postérieurs au 22 septembre 1966 doivent être accumulés dans les comptes mais le paiement n'en est pas dû avant le 31 décembre de l'année au cours de laquelle le ministre des Transports aura déclaré achevée l'exécution du projet de jumelage du canal de Welland.

Les frais d'exploitation et d'entretien des canaux et des ouvrages relevant de l'Administration sont dé-

finis, en vertu de l'alinéa c) de l'article 16, comme comprenant tous les frais d'exploitation de l'Administration ainsi que les réserves qui peuvent être approuvées par le Ministre. L'Administration est d'avis qu'il n'est pas nécessaire d'inclure la dépréciation dans les frais d'exploitation et d'entretien et que l'amortissement au cours d'une période de cinquante ans du principal des emprunts ainsi que des intérêts, comme l'exigent les alinéas a) et b), satisfait aux exigences de la Loi. Les frais afférents à l'année à l'étude ne comprennent donc aucune réserve pour la dépréciation.

Comme les années précédentes, une somme a été prévue pour le remplacement des machines et du matériel d'écluse, de pont et de bâtiment de la section de Montréal au lac Ontario qui devront être remplacés durant la période de cinquante ans. Le montant affecté à cette fin en 1966 a été calculé selon le coût estimatif du remplacement et s'est élevé à \$867,428, ce qui porte la réserve pour remplacement des machines et du matériel accumulée au 31 décembre 1966 à \$6,574,436 après déduction d'un montant de \$58,693 employé à l'acquisition de certains biens meubles au cours de l'année. Il n'a pas été prévu de montant, en 1966, pour le remplacement des machines et du matériel de la section de Welland.

Aucune somme n'a été affectée au remplacement des bâtiments, des portes d'écluse, des écluses

et des ponts dans les deux sections de la voie maritime. L'Administration estime que ces ouvrages de la voie maritime peuvent être tenus constamment en bon état dans le cadre de son programme d'entretien.

En conformité des prescriptions de l'article 87 de la Loi sur l'administration financière et sous réserve des observations qui précèdent, je déclare qu'à mon avis

- (a) l'Administration a tenu des livres de comptabilité appropriés;
- (b) les états financiers de l'Administration
 - (i) ont été préparés sur une base comparable à celle de l'année précédente et concordent avec les livres de comptabilité;
 - (ii) dans le cas du bilan, donnent un exposé juste et fidèle de l'état des affaires de l'Administration à la fin de l'année financière; et
 - (iii) dans le cas de l'état des recettes et des dépenses, donnent un exposé juste et fidèle des recettes et des dépenses de l'Administration pour l'année financière; et
- (c) les opérations de l'Administration venues à ma connaissance étaient de la compétence de l'Administration aux termes de la Loi sur l'administration financière et de toute autre loi applicable à l'Administration.

L'Auditeur général du Canada,
A. M. HENDERSON

The St. Lawrence Seaway Authority

(Established by the St. Lawrence Seaway Authority Act)

BALANCE SHEET AS AT DECEMBER 31, 1966 (with comparative figures as at December 31, 1965)

ASSETS		1966	1965
Current Assets:			
Cash	\$	370,224	\$ 204,007
Treasury bills of Canada and short-term bank deposits		7,401,290	6,521,556
Due from The Seaway International Bridge Corporation, Ltd.		181,833	164,530
Due from Government of Canada re:			
Non-toll canals (Exhibit I)		774,142	423,445
Welland Section operating deficit		10,058,959	8,174,573
Accounts receivable (less allowances for doubtful accounts)		949,050	726,523
Overpaid municipal grants		68,834	108,515
Inventories of materials, minor equipment and shop work in progress, at cost (less allowance for obsolescence)		648,949	604,853
Total Current Assets		20,453,281	16,928,002
Bonds and Cash held as Contractors' Security Deposits and Toll Guarantees (contra)		426,322	674,692
Investment in and Loan to The Seaway International Bridge Corporation, Ltd.		25,000	25,000
Capital Assets, at cost or transfer value (Schedule B)		541,939,978	514,154,508

The accompanying notes are an integral part of the financial statements.

Certified correct:

J. M. MARTIN

Director of Finance and Accounting

Approved:

P. CAMU

President

\$562,844,581

\$531,782,202

Notes to Financial Statements

1. Outstanding commitments under uncompleted contracts as at December 31, 1966 amounted to approximately \$4,900,000.
2. The liability of the Authority with respect to compensation for properties under expropriation at December 31, 1966 is estimated by the Authority as amounting to \$12,700,000.
3. The Department of Highways of Ontario has lodged with the Authority a claim for reimbursement of expenditures of \$772,000 on two highway tunnel projects on which work has been terminated due to the proposed realignment of the Welland Canal.

4. A court action filed by a contractor against the Authority claiming \$254,000 additional compensation in respect of a completed contract, resulted in a court award in February 1967 in favour of the contractor of approximately \$95,000 including interest to December 31, 1966.
5. Loans to finance cost of construction on the Welland Canal effected prior to September 23, 1966, which aggregate \$72,500,000 have been on an interest-free basis in accordance with the Orders in Council governing their terms and conditions. However, in accordance with Order in Council P.C. 1966-1828 of September 22, 1966, loans effected since that date bear interest which shall accrue but not be payable until construction on the Welland Canal Twinning Project is completed.

LIABILITIES		
	1966	1965
Current Liabilities:		
Accounts payable and accrued liabilities	\$ 5,284,811	\$ 5,033,495
Temporary loans under section 26 of the Act	9,500,000	6,770,000
Due to Saint Lawrence Seaway Development Corporation re tolls	68,713	47,199
Contractors' holdbacks	277,310	627,837
Total Current Liabilities	15,130,834	12,478,531
Contractors' Security Deposits and Toll Guarantees (contra)	426,322	674,692
Accumulated Provision for Replacement of Machinery and Equipment	6,574,436	5,765,701
Proprietary Equity of the Government of Canada:		
Capital Assets entrusted to the Authority by the Governor in Council under section 14 of the Act (Welland Canal)	130,716,890	130,716,890
Loans under section 25 of the Act		
Interest-bearing	335,150,000	326,700,000
Interest-free	72,500,000	52,500,000
Interest on loans—payment deferred	47,767,860	45,145,000
	586,134,750	555,061,890
Deduct: Deficit—per Statement of Deficit	45,421,761	42,198,612
Net Equity	540,712,989	512,863,278
	<u><u>\$562,844,581</u></u>	<u><u>\$531,782,202</u></u>

I have examined the above Balance Sheet and the related Statement of Income and Expense and have reported thereon under date of March 29, 1967 to the Minister of Transport.

A. M. HENDERSON
Auditor General of Canada

6. In accordance with the provisions of Order in Council P.C. 1967-100 of January 19, 1967, the principal amount of interest-bearing loans received under section 25 of the St. Lawrence Seaway Authority Act to finance construction of the Montreal-Lake Ontario Section of the Seaway, together with interest previously deferred and all other interest thereon now accrued or accruing up to December 31, 1967, is to be repaid, together with current interest thereon, in forty-two equal annual instalments commencing December 31, 1968.
7. Tolls on the Welland Section of the Seaway have been suspended since 1962. The operating deficit of the Welland Section was financed during the year by means of interest-free temporary loans from the Government of Canada under section 26 of the Act. At December 31, 1966 these loans totalled \$9,500,000. Department of Transport Vote 107g, presented to the House of Commons on March 10, 1966,

provides for reimbursement to the Authority of the Welland Section deficit of \$10,058,959 for the year ended December 31, 1966.

8. The Accumulated Provision for Replacement of Machinery and Equipment amounting to \$6,574,436 at December 31, 1966 represents the accumulated provision, at estimated replacement values, for replacement of assets in the Montreal-Lake Ontario Section of the Seaway which the Authority considers will require replacement. No provision has been made in the accounts for replacement of buildings, lock gates, and lock and bridge structures. The Authority considers that these Seaway works can be maintained in working condition at all times under its maintenance programme. No provision has been made for depreciation or replacement of assets in the Welland Section.

STATEMENT OF DEFICIT FOR THE YEAR ENDED DECEMBER 31, 1966

	MONTREAL- LAKE ONTARIO SECTION	WELLAND SECTION	TOTAL
Balance as at January 1, 1966	\$42,198,612	\$ —	\$42,198,612
Add:			
Loss for the year, per Statement of Income and Expense	3,223,149	10,058,959	13,282,108
	<u>45,421,761</u>	<u>10,058,959</u>	<u>55,480,720</u>
Deduct:			
Welland Canal operating deficit for the year to be recovered from Department of Transport 1966-67 appropriations	<u>—</u>	<u>10,058,959</u>	<u>10,058,959</u>
Balance as at December 31, 1966	<u><u>\$45,421,761</u></u>	<u><u>\$ —</u></u>	<u><u>\$45,421,761</u></u>

Administration de la voie maritime du Saint-Laurent

(Créée par la Loi sur l'Administration de la voie maritime du Saint-Laurent)

BILAN ARRÊTÉ AU 31 DÉCEMBRE 1966

(avec chiffres comparatifs au 31 décembre 1965)

ACTIF		1966	1965
Disponibilités:			
Encaisse	\$	370,224	\$ 204,007
Bons du Trésor du Canada et dépôts bancaires à court terme		7,401,290	6,521,556
Dette de la Seaway International Bridge Corporation, Ltd.		181,833	164,530
Dette du Gouvernement du Canada: canaux non soumis au péage (état 1)		774,142	423,445
Déficit d'exploitation — section de Welland		10,058,959	8,174,573
Comptes débiteurs (moins provision pour créances douteuses)		949,050	726,523
Subventions à des municipalités payées en trop		68,834	108,515
Inventaires des matériaux, du matériel secondaire et des travaux d'atelier en cours, au prix coûtant (moins réserve pour matériel désuet)		648,949	604,853
Total des disponibilités		20,453,281	16,928,002
Cautionnements et espèces détenus à titre de dépôts de garantie des entrepreneurs et de garanties de péages (contre-partie)		426,322	674,692
Investissement et prêts—Seaway International Bridge Corporation, Ltd.		25,000	25,000
Immobilisations, au prix coûtant ou à la valeur de cession (Annexe B)		541,939,978	514,154,508

Les remarques ci-après font partie intégrante du présent état.

Certifié exact:

Le Directeur des finances et de la comptabilité,
J. M. MARTIN

Approuvé:

Le Président,
P. CAMU

\$562,844,581

\$531,782,202

Remarques concernant les états financiers

1. Les sommes restant à verser relativement aux contrats dont les travaux n'étaient pas terminés au 31 décembre 1966 s'élèvent à environ \$4,900,000.
2. L'Administration estime à \$12,700,000 la somme à verser pour indemnisation relativement aux propriétés en voie d'expropriation au 31 décembre 1966.
3. Le ministère de la Voirie de l'Ontario a adressé à l'Administration une demande de remboursement de \$722,000 représentant des dépenses engagées relativement à deux projets de tunnels routiers dont la construction a été interrompue en raison du nouveau tracé qu'il est projeté de donner au canal de Welland.

4. Une réclamation de rémunération supplémentaire relative à un contrat exécuté au sujet de laquelle l'entrepreneur avait intenté une poursuite contre l'Administration pour un montant de \$254,000 a été réglée en février 1967 par une décision du tribunal accordant à l'entrepreneur un montant de \$95,000 comprenant les intérêts jusqu'au 31 décembre 1966.

5. Pour financer les frais de construction afférents au canal de Welland et engagés avant le 23 septembre 1966, lesquels s'établissent à \$72,500,000, des emprunts ne portant pas intérêts ont été obtenus conformément aux décrets du Conseil qui en régissent les termes et conditions. Toutefois, en conformité du décret C.P. 1966-1828 du 22 septembre 1966, les emprunts contractés depuis cette date portent des intérêts qui s'accumuleront mais qui n'auront pas à être payés avant que le programme de jumelage du canal de Welland soit terminé.

PASSIF			
		1966	1965
Exigibilités:			
Comptes créditeurs et passif cumulé	\$	5,284,811	\$ 5,033,495
Emprunts temporaires en vertu de l'article 26 de la Loi		9,500,000	6,770,000
Somme due à la Saint Lawrence Seaway Development Corporation pour péages		68,713	47,199
Retenues des entrepreneurs		277,310	627,837
Total des exigibilités		15,130,834	12,478,531
Dépôts de garantie des entrepreneurs et garanties de péages (contre-partie)		426,322	674,692
Réserve accumulée pour renouvellement des machines et du matériel		6,574,436	5,765,701
Part de propriétaire du Gouvernement du Canada:			
Immobilisations confiées à l'Administration par le gouverneur en conseil en vertu de l'article 14 de la Loi (canal de Welland)		130,716,890	130,716,890
Emprunts en vertu de l'article 25 de la Loi			
Productifs d'intérêts		335,150,000	326,700,000
Non productifs d'intérêts		72,500,000	52,500,000
Intérêts sur emprunts—paiement différé		47,767,860	45,145,000
		586,134,750	555,061,890
Déduire: déficit, selon l'état du déficit		45,421,761	42,198,612
Part nette		540,712,989	512,863,278
		\$562,844,581	\$531,782,202

J'ai examiné le bilan ci-dessus ainsi que l'état des recettes et des dépenses s'y rapportant, et j'ai présenté un rapport au ministre des Transports le 29 mars 1967.

L'Auditeur général du Canada,
A. M. HENDERSON

6. Aux termes du décret C.P. 1967-100 du 19 janvier 1967, le principal des emprunts productifs d'intérêts reçus en vertu de l'article 25 de la Loi sur l'Administration de la voie maritime du Saint-Laurent pour le financement de la construction de la section de Montréal au lac Ontario, ainsi que les intérêts précédemment différés et tous les autres intérêts courus ou à échoir au 31 décembre 1967 devront être payés, de même que les intérêts courants, en quarante-deux versements annuels égaux, à compter du 31 décembre 1968.

7. Les péages dans la section de Welland sont suspendus depuis 1962. Le financement du déficit d'exploitation de la section de Welland durant l'année a été effectué au moyen d'emprunts temporaires non productifs d'intérêts, obtenus du gouvernement du Canada en vertu de l'article 26 de la Loi. Au 31 décembre 1966, ces emprunts s'élevaient à \$9,500,000. Le crédit n° 107g du

ministère des Transports, présenté à la Chambre des communes le 10 mars 1966, prévoit que l'Administration sera remboursée du déficit de \$10,058,959 de la section de Welland pour l'année terminée le 31 décembre 1966.

8. La réserve accumulée pour le renouvellement des machines et du matériel, qui était de \$6,574,436 au 31 décembre 1966, représente la réserve accumulée, à la valeur estimative de renouvellement, pour le renouvellement des biens de la section de Montréal au lac Ontario qui, de l'avis de l'Administration, devront être remplacés. Rien n'a été prévu dans les comptes pour le remplacement des bâtiments, des portes d'écluse, des écluses et des ponts. L'Administration estime que ces ouvrages de la voie maritime peuvent être tenus en état de fonctionnement en tout temps dans le cadre de son programme d'entretien. Rien n'a été prévu pour la dépréciation ou le renouvellement des biens dans la section de Welland.

ÉTAT DU DÉFICIT POUR L'ANNÉE TERMINÉE LE 31 DÉCEMBRE 1966

	SECTION DE MONTRÉAL AU LAC ONTARIO	SECTION DE WELLAND	TOTAL
Solde au 1 ^{er} janvier 1966	\$42,198,612	\$ —	\$42,198,612
Ajouter:			
Perte de l'année, selon l'état des recettes et des dépenses	3,223,149	10,058,959	13,282,108
	<u>45,421,761</u>	<u>10,058,959</u>	<u>55,480,720</u>
Déduire:			
Déficit d'exploitation du canal de Welland pour l'année écoulée, à récupérer sur crédits du ministère des Transports pour 1966-1967	<u>—</u>	<u>10,058,959</u>	<u>10,058,959</u>
Solde au 31 décembre 1966	<u><u>\$45,421,761</u></u>	<u><u>\$ —</u></u>	<u><u>\$45,421,761</u></u>

**STATEMENT OF INCOME AND EXPENSE
FOR THE YEAR ENDED DECEMBER 31, 1966**

(with comparative figures for the year ended December 31, 1965)

	MONTREAL-L. ONTARIO		WELLAND
	1966	1965	1966
INCOME			
Tolls assessed	\$17,281,526	\$15,480,631	—
Rentals	77,522	62,271	527,236
Wharfage	1,557	1,768	310,106
Interest	616,976	192,037	5,137
Miscellaneous	101,415	114,692	220,625
S.L.S. "Hercules" heavy lift charges	72,185	34,575	—
The Seaway International Bridge Corporation Ltd. — net income	181,833	164,530	—
	<u>18,333,014</u>	<u>16,050,504</u>	<u>1,063,104</u>
EXPENSE			
Operation and maintenance			
Salaries and wages (excluding \$171,189 charged to construction costs)	1,909,308	1,508,369	3,974,246
Employee benefits	201,597	139,653	431,015
Major maintenance materials and services	294,429	357,550	3,342,214
Grants in lieu of municipal taxes	43,092	40,111	445,572
Traffic survey to relieve shipping congestion	—	—	431,622
Bridge operating services by railway companies	91,497	77,974	113,690
Equipment rental and installation cost — Traffic Control Centre	—	—	199,197
Security guards	98,509	99,707	—
Other materials and services	573,504	471,967	494,427
	<u>3,211,936</u>	<u>2,695,331</u>	<u>9,431,983</u>
Regional administration			
Salaries and wages	458,296	338,961	493,499
Employee benefits	49,041	33,708	54,634
Office expenses	47,890	22,388	36,608
Travel and removal	21,279	18,181	17,902
Miscellaneous	98,762	72,479	148,154
	<u>675,268</u>	<u>485,717</u>	<u>750,797</u>
Less portion applicable to:			
non-toll canals	223,666	170,843	41,603
construction costs	—	—	126,000
	<u>451,602</u>	<u>314,874</u>	<u>583,194</u>
Headquarters administration (Schedule A)	<u>427,960</u>	<u>324,918</u>	<u>844,815</u>
Engineering expense (Schedule A)	<u>286,103</u>	<u>53,501</u>	<u>252,303</u>
Economic survey	<u>8,229</u>	<u>124,579</u>	<u>—</u>
	<u>722,292</u>	<u>502,998</u>	<u>1,097,118</u>
Total expense	<u>4,385,830</u>	<u>3,513,203</u>	<u>11,112,295</u>
Net operating income (loss) before providing for interest and for replacement of machinery and equipment	<u>13,947,184</u>	<u>12,537,301</u>	<u>(10,049,191)</u>
Interest on loans from Government of Canada (excluding \$64,322 charged to construction costs)	<u>16,302,905</u>	<u>15,752,593</u>	<u>9,768</u>
Provision for replacement of machinery and equipment	<u>867,428</u>	<u>881,860</u>	<u>—</u>
	<u>17,170,333</u>	<u>16,634,453</u>	<u>9,768</u>
Net Loss for the Year	<u>\$ 3,223,149</u>	<u>\$ 4,097,152</u>	<u>\$10,058,959</u>

ÉTAT DES RECETTES ET DES DÉPENSES

POUR L'ANNÉE TERMINÉE LE 31 DÉCEMBRE 1966

(avec chiffres comparatifs de l'année terminée le 31 décembre 1965)

WELLAND	TOTAL	
1965	1966	1965
\$ —	\$17,281,526	\$15,480,631
504,943	604,758	567,214
154,817	311,663	156,585
40,655	622,113	232,692
97,262	322,040	211,954
—	72,185	34,575
—	181,833	164,530
797,677	19,396,118	16,848,181
RECETTES		
Péages		
Loyers		
Droits d'accostage et de terre-plein		
Intérêts		
Divers		
S.L.S. Hercules — droits de levage de charges lourdes		
Seaway International Bridge Corporation Ltd. — (revenu net)		
DÉPENSES		
Exploitation et entretien		
Traitements et salaires (non compris \$171,189 imputés sur les frais de construction)		
Prestations aux employés		
Travaux d'entretien importants, matériaux et services		
Subventions tenant lieu d'impôts municipaux		
Relevé du trafic effectué en vue de réduire les encombrements		
Exploitation de ponts par des compagnies de chemin de fer		
Location et installation de matériel — Centre de contrôle de la circulation		
Service de sécurité		
Autres matériaux et services		
3,270,816	5,883,554	4,779,185
280,600	632,612	420,253
2,393,665	3,636,643	2,751,215
394,294	488,664	434,405
741,652	431,622	741,652
79,958	205,187	157,932
—	199,197	—
—	98,509	99,707
382,597	1,067,931	854,564
7,543,582	12,643,919	10,238,913
Administration régionale		
Traitements et salaires		
Prestations aux employés		
Frais de bureau		
Voyages et déménagements		
Divers		
380,503	951,795	719,464
33,444	103,675	67,152
23,164	84,498	45,552
14,787	39,181	32,968
132,108	246,916	204,587
584,006	1,426,065	1,069,723
42,754	265,269	213,597
—	126,000	—
541,252	1,034,796	856,126
644,987	1,272,775	969,905
171,104	538,406	224,605
—	8,229	124,579
816,091	1,819,410	1,319,089
8,900,925	15,498,125	12,414,128
Administration centrale (Annexe A)		
Services techniques (Annexe A)		
Étude économique		
Dépenses totales		
Perte nette d'exploitation avant provision pour intérêts et renouvellement des machines et du matériel		
(8,103,248)	3,897,993	4,434,053
Intérêts sur prêts du Gouvernement du Canada:		
(non compris \$64,322 imputés sur les frais de construction)		
Provision pour renouvellement des machines et du matériel		
71,325	16,312,673	15,823,918
—	867,428	881,860
71,325	17,180,101	16,705,778
\$ 8,174,573	\$13,282,108	\$12,271,725
Perte nette de l'année		

Schedule A
STATEMENT OF HEADQUARTERS ADMINISTRATION AND ENGINEERING EXPENSE
FOR THE YEAR ENDED DECEMBER 31, 1966

(with comparative figures for the year ended December 31, 1965)

HEADQUARTERS ADMINISTRATION

	1966
Salaries of members and executive officers	\$ 163,921
Other salaries	1,106,339
Employee benefits	128,898
Office expenses	74,096
Communications	61,490
Publications	55,830
Travel and removal	46,937
Grants in lieu of municipal taxes	39,584
Rental of office machines	34,503
Office accommodation	22,400
Miscellaneous	70,248
	<u>1,804,246</u>

Less portion allocated to:

Non-toll canals	164,962
Construction costs	366,509
	<u>531,471</u>

Total per Statement of Income and Expense

\$1,272,775

ENGINEERING

Salaries and wages	\$1,330,673
Employee benefits	131,430
Office accommodation	103,504
Office expenses	70,877
Travel and removal	67,367
Miscellaneous	50,761
	<u>1,754,612</u>

Less portion allocated to:

Non-toll canals	27,986
Construction costs	1,188,220
	<u>1,216,206</u>

Total per Statement of Income and Expense

\$ 538,406

Annexe A

ÉTAT DES DÉPENSES DE L'ADMINISTRATION CENTRALE ET DES SERVICES TECHNIQUES POUR L'ANNÉE TERMINÉE LE 31 DÉCEMBRE 1966

(avec chiffres comparatifs de l'année terminée le 31 décembre 1965)

1965	ADMINISTRATION CENTRALE
\$ 137,916	Traitements des membres et du personnel de direction
842,279	Autres traitements et salaires
86,252	Prestations aux employés
53,966	Frais de bureau
51,834	Communications
2,732	Publications
44,409	Voyages et déménagements
35,333	Subventions tenant lieu d'impôts municipaux
34,581	Location de machines de bureau
22,400	Bureaux
36,535	Divers
<u>1,348,237</u>	

145,087	canaux non soumis au péage
<u>233,245</u>	Frais de construction
<u>378,332</u>	

\$ 969,095 **Total, selon l'état des recettes et des dépenses**

	SERVICES TECHNIQUES
\$ 834,057	Traitements et salaires
77,426	Prestations aux employés
72,707	Bureaux
69,625	Frais de bureau
60,100	Voyages et déménagements
46,232	Divers
<u>1,160,147</u>	

11,077	canaux non soumis au péage
<u>924,465</u>	Frais de construction
<u>935,542</u>	

\$ 224,605 **Total, selon l'état des recettes et des dépenses**

Schedule B

CAPITAL ASSETS AS AT DECEMBER 31, 1966

(with comparative figures as at December 31, 1965)

	MONTREAL- L.ONTARIO (1)	PONT NORTH CHANNEL BRIDGE (1)	WELLAND Acquired Acquires (1)
Land	\$ 8,423,665	\$ 501,804	\$ 5,964,815
Buildings	1,795,267	1,005,004	35,549
Channels and canals	116,945,547	—	28,330,291
Locks	115,438,717	—	5,579,537
Bridges	25,534,897	7,067,984	177,704
Gatelifters	2,707,802	—	—
Movable equipment—including shore, floating, shop and other equipment	1,032,330	—	577,379
Works under construction	2,043,380	—	41,718,196
	273,921,605	8,574,792	82,383,471
Remedial works—expenditures on property owned by others	46,541,059	—	87,039
	<u>\$320,462,664</u>	<u>\$ 8,574,792</u>	<u>\$ 82,470,510</u>

(1) at cost

(2) at transfer value

Note—The Authority also administers at Lachine, Cornwall, Sault Ste. Marie and the Niagara Peninsula, non-toll canals and other properties comprising land and improvements with a cost valuation of \$48,115,330 and movable equipment with a cost valuation of \$1,103,802.

Annexe B

IMMOBILISATIONS AU 31 DÉCEMBRE 1966

(avec chiffres comparatifs au 31 décembre 1965)

<u>WELLAND</u>		<u>TOTAL</u>		
Entrusted Confiées (2)	1966	1965		
\$ 1,917,418	\$ 16,807,702	\$ 12,661,807		Terrains
3,522,055	6,357,875	6,307,966		Bâtiments
36,435,591	181,711,429	181,595,992		Chenaux et canaux
78,925,095	199,943,349	199,694,614		Écluses
8,340,817	41,121,402	41,114,227		Ponts
772,220	3,480,022	3,465,774		Lève-portes
518,816	2,128,525	2,115,554		Matériel mobile—y compris le matériel flottant, riverain, d'atelier et autre
—	43,761,576	21,026,162		Ouvrages en construction
130,432,012	495,311,880	467,982,096		
—	46,628,098	46,172,412		Ouvrages de protection, dépenses sur des biens appartenant à d'autres
<u>\$130,432,012</u>	<u>\$541,939,978</u>	<u>\$514,154,508</u>		

(1) au prix coûtant

(2) à la valeur de cession

Remarque—L'Administration administre en outre à Lachine, à Cornwall, à Sault-Sainte-Marie et dans la péninsule de Niagara, des canaux non soumis au péage et d'autres biens qui comprennent des terrains et des améliorations dont la valeur au prix coûtant est de \$48,115,330 et du matériel mobile dont la valeur au prix coûtant est de \$1,103,802.

Exhibit I
NON-TOLL CANALS
STATEMENT OF EXPENSE, INCOME AND CAPITAL EXPENDITURES
FOR THE YEAR ENDED DECEMBER 31, 1966

(with comparative figures for the year ended December 31, 1965)

	1966
EXPENSE:	
Operation and maintenance:	
Salaries and wages	\$1,374,687
Employee benefits	139,201
Major maintenance materials and services	258,997
Other materials and services	224,844
Grants in lieu of municipal taxes	769,094
Grant to county of Welland	150,000
	<hr/> 2,916,823
Administration and engineering expense (portion applicable to non-toll canals):	458,217
Total expense	<hr/> 3,375,040
INCOME:	
Rentals	334,345
Wharfage	54,899
Miscellaneous	306,996
Total income	<hr/> 696,240
Operating deficit	2,678,800
CAPITAL EXPENDITURES:	
Construction of works	27,312
Acquisition of equipment	7,794
	<hr/> 35,106
Net expenditures	<hr/> \$2,713,906
Recovered from:	
Department of Transport 1965-66 appropriations, Vote 105	\$ 564,442
Department of Transport 1966-67 appropriations, Vote 105	1,375,322
	<hr/> 1,939,764
Balance to be recovered from appropriations	774,142
	<hr/> \$2,713,906

État I
CANAUX NON SOUMIS AU PÉAGE
ÉTAT DES DÉPENSES, DES RECETTES ET DES IMMOBILISATIONS POUR
L'ANNÉE TERMINÉE LE 31 DÉCEMBRE 1966

(avec chiffres comparatifs de l'année terminée le 31 décembre 1965)

1965	
	DÉPENSES:
	Exploitation et entretien:
\$1,209,057	Traitements et salaires
105,655	Prestations aux employés
91,025	Travaux d'entretien importants, matériaux et services
214,669	Autres matériaux et services
245,635	Subventions tenant lieu d'impôts municipaux
—	Subvention au comté de Welland
<u>1,866,041</u>	
	Administration et services techniques
369,760	(partie applicable aux canaux non soumis au péage)
<u>2,235,801</u>	Dépenses totales
	RECETTES:
343,815	Loyers
50,825	Droits d'accostage et de terre-plein
233,368	Divers
<u>628,008</u>	Recettes totales
1,607,793	Déficit d'exploitation
	DÉPENSES EN IMMOBILISATIONS:
76,819	Construction d'ouvrages
5,895	Acquisition de matériel
<u>82,714</u>	
<u>\$1,690,507</u>	Dépenses nettes
	Récupéré sur
	Crédit n° 105 du ministère des Transports pour 1965-1966
	Crédit n° 105 du ministère des Transports pour 1966-1967
	Solde à récupérer sur les crédits

Canadians have financed and constructed a series of canal systems along the St. Lawrence-Great Lakes waterway over the past two centuries. The history of this canal development is one of successive expansion to meet the demands of a progressing economy. The canals evolved from canoe routes — used in the era of the fur trade — into modern commercial waterways serving the needs of an industrialized society.

The evolution of the Welland canals illustrates the growth in water transportation in the Great Lakes-St. Lawrence system. The present canal is the fourth to be constructed over the Niagara escarpment. The change in the size of the locks and of the vessels that used the various canals is shown in the diagrams below:

Au cours des deux derniers siècles, les Canadiens ont financé et construit une série de réseaux de canaux sur la voie navigable du Saint-Laurent et des Grands lacs. L'histoire de l'aménagement de ces canaux témoigne d'une expansion soutenue, nécessitée par la demande d'une économie croissante. Utilisés par les canoës à l'époque du commerce des fourrures, les canaux sont devenus graduellement des artères commerciales modernes qui répondent aux besoins d'une société industrialisée.

L'évolution des canaux de Welland illustre le progrès du transport par eau sur le réseau des Grands lacs et du Saint-Laurent. Le canal actuel est le quatrième à avoir été construit au-dessus de l'escarpement de Niagara. Les changements apportés aux dimensions des écluses et aux navires utilisant les différents canaux sont indiqués dans les diagrammes suivants:

First Welland Canal

used by vessels of up to 100 feet in length with cargoes of 165 tons. Number of locks — 39, draft — 8'.



TYPICAL LOCK

ÉCLUSE TYPIQUE

Premier canal de Welland

emprunté par les navires d'une longueur maximum de 100 pieds et transportant une cargaison de 165 tonnes. Nombre d'écluses: 39; tirant d'eau: 8 pieds.

Second Welland Canal

used by vessels with maximum length of 140 feet and cargo capacity of 750 tons. Number of locks — 27, draft — 9'.



TYPICAL LOCK

ÉCLUSE TYPIQUE

Deuxième canal de Welland

emprunté par les navires d'une longueur maximum de 140 pieds et d'une capacité de 750 tonnes. Nombre d'écluses: 27; tirant d'eau: 9 pieds.

Third Welland Canal

designed to accommodate vessels of up to 225 feet in length with a cargo capacity of 2700 tons. Number of locks — 26, draft — 14'.



TYPICAL LOCK

ÉCLUSE TYPIQUE

Troisième canal de Welland

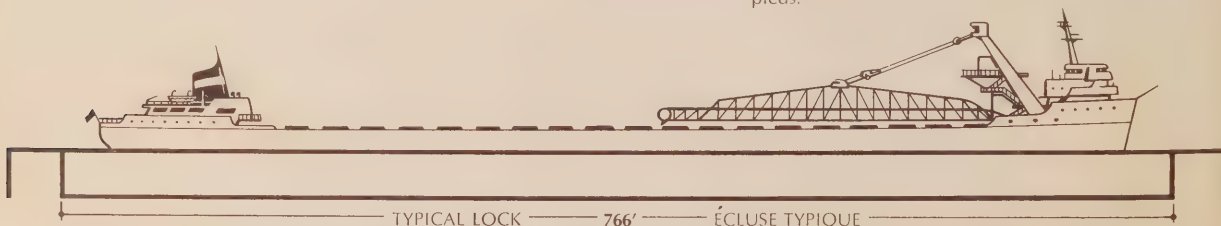
conçu pour les navires d'une longueur maximum de 225 pieds et d'une capacité de 2,700 tonnes. Nombre d'écluses: 26; tirant d'eau: 14 pieds.

The Present Welland Canal

handles vessels of up to 730 feet in length with cargoes of up to 28,000 tons. Number of locks — 8, draft — 27'.

Le canal de Welland actuel

peut servir à des navires d'une longueur maximum de 730 pieds qui transportent une cargaison d'au plus 28,000 tonnes. Nombre d'écluses: 8; tirant d'eau: 27 pieds.



TYPICAL LOCK

ÉCLUSE TYPIQUE

A large laker, the THUNDER BAY, passes the site of EXPO '67
as it leaves the Seaway downbound towards a St. Lawrence River
port with a cargo of grain.

*Un grand navire de lacs, le THUNDER BAY, passe en face de l'emplacement de
l'EXPO 67 alors qu'il quitte la voie maritime à destination d'un port du
Saint-Laurent avec sa cargaison de grains.*





1867 | 1967

CANADA

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